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SECOND SERIES VOL. IX, No. 6

BULLETIN

OF

THE NEW YORK ACADEMY OF MEDICINE

INCORPORATED 1851

JUNE, 1933

PUBLISHED MONTHLY BY

THE NEW YORK ACADEMY OF MEDICINE

2 East 103 Street

New York, N. Y.

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TREATING THE PNEUMONIA PATIENT*

ALEXANDER LAMBERT

Although pneumonia is a bacterial disease of the lungs produced by many different bacteria, when we speak of it we almost invariably mean pneumococcus pneumonia, and even though the pneumococcus pneumonia shows a very definite picture running truer to type than almost any other disease, the pneumococci which produce it are divided into many types, each type separated by a specific capsule from all the others, thus making each type of pneumococcus pneumonia a disease which may demand separate specific treatment effective in its immunization for that type alone.

Pneumonia also for decades has run a fairly steady mortality, varying in slight degrees from year to year, but basically year in and year out about the same. Certain cases, no matter what the treatment, would recover, the body resisted the infection and recovered. Youth, vigor and previous abstinence from alcohol enormously favored recovery; age, enfeeblement and previous alcoholic indulgence weighed heavily in the scale against the patient.

Ideas have changed as our knowledge has slowly developed concerning the processes that go on in the intricate struggle for existence of the patient, and the complicated methods of attack by the various types of pneumococcus. As our knowledge of this has developed, our knowledge of

*Delivered before The New York Academy of Medicine, December 16, 1932, in the Friday Afternoon Lecture Series.

the resistance of the body to this infection has also developed, and some years ago Aschoff seems finally to have summed up the knowledge of resistance to infection in general, and to the pneumococci as well.

Aschoff some eight years ago in his Janeway Lecture in New York described as one picture the knowledge at that time of the reticulo-endothelial cells in the body as endowed with resistance to the various infections. We cannot go too much into detail, but briefly the reticulo-endothelial cells lie in the lining of the sinuses of the lymph nodes, in the blood sinuses of the spleen, in the blood capillaries of the liver globule, that is Kupffer's stellate cells, and in the capillaries of the bone marrow, the adrenal cortex, and the hypophysis.

Later it has been found that there are also cells in the lining of the lung tissue, which appear there as the macrophagic cells described by Metchnikoff, which are concerned only with the defense of the organism. These macrophages, that is the histiocytes lining the alveoli in the lungs, belong really to this reticulo-endothelial cellular system, and are concerned in their defense of the organism with ingestion of bacteria, which have made their way by the air passages into the lungs, these macrophages in return producing antibodies, and forming antitoxins.

Since these ideas of Metchnikoff's were brought forward, the defensive conception of these reticulo-endothelial cells has broadened greatly. It is believed that they possess a dominating role in the formation of bile, and in metabolism of water, lipoids, iron, cholesterol, etc.; it is now thought that the connective tissue which we formerly believed to be only a silent frame work, is also endowed with highly differentiated functions, even perhaps having properties of internal secretion.

Fried and Rose have lately emphasized that these macrophage cells in the lungs come from a different embryologic layer than the bronchi. These are mesenchyme cells, and the bronchial tissues are of endodermal origin. The

bronchi are epithelial tissues, but the cellular covering of the capillary vessels is from the mesenchyme, the bronchi really pushing their way through the tissues forming the alveolar process of the lungs, and the alveoli do not grow as buds from the bronchi. These macrophages are stimulated by extraneous substances coming into the lungs with the air, such as dyes, or oils, or other substances, they proliferate and separate from the alveolar walls, and form a part of the exudate. They form exudates in diseases other than pneumonia as the heart disease cells, so commonly found in the lungs with the severe types of the mitral stenotic lesions of the heart. In examining lungs in different diseases, Fried has reported that he has found a few instances of human lungs which showed the same characteristics noted in the lungs of animals during experimental work.

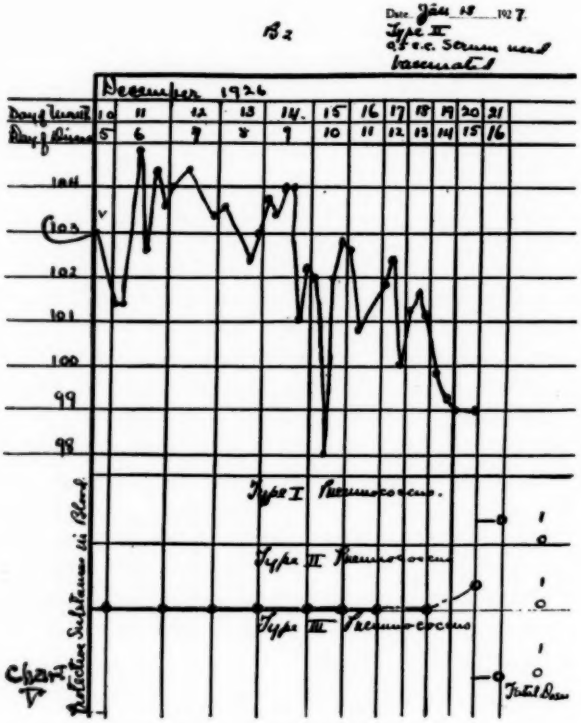
Recently in our work in Bellevue on pneumonia, supported by the Baruch Foundation, Dr. Curphey drew our attention to the lungs of two patients dying of Type 1 pneumonia. Both these patients were very stout women, who had a severe Type 1 infection with bacteremia, but who recovered from their bacteremia, after treatment by the serum, and yet died. The exudate in their lungs was made up chiefly of these macrophagic cells, quite different from the usual pneumonic exudate of fibrin, red blood cells, leucocytes, macrophages and pneumococci. It was as if after the infection was overcome a tremendous defensive out-pouring of these cells had taken place as a defense reaction.

I have gone so fully into these details of defense of the organism in order that we may understand more clearly what is taking place in the struggle for existence in pneumonia, when we use the specific types of serum, or vaccines, that in certain instances are proving such valuable help in overcoming this disease.

It is not the simple problem of thinking of the lungs as a mere bag lined with epithelial cells, in which there is a constant influx and out-pouring of air, with the percentage

of oxygen the essential feature to be furnished the patient while antibodies are poured in, or the germs finally win out; it is vastly more than that, and a great deal of the struggle for existence takes place in the lung itself, much more than we formerly had believed.

The antibodies in the blood, as we shall see, are present, but vary greatly in amount whether a man live or die, as the case may be, but they do not appear in great abundance until the 5th day of the disease, or even until the crisis has occurred. Patients may live and recover with a varying amount of deficit of antibodies in the blood.



Vaccinated Case: Recovery With no Antibodies in Blood Until After Crisis Occurred.

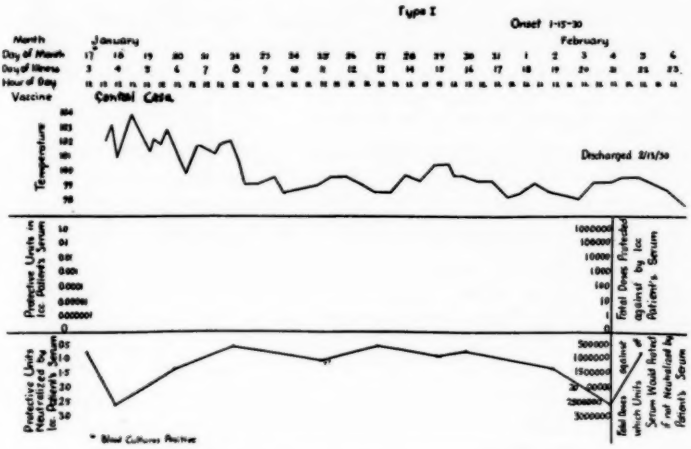


Chart XVIII Control Case: Recovery, Definite Absence of Antibodies Throughout First 23 Days of Disease and Positive Bacteremia on Third and Sixth Day.

It is a noticeable factor that in the specific treatments of pneumonia, whether by vaccines, or by serum, the first three days of the disease is the precious time, in which injections of serums or vaccines must be made to be most fully effective, and to give the patient the full advantage of their action. After that time, there seems to be a closing down of the area occupied by the pneumonic exudate, and whether it be that fibrinous plugs occur in the capillaries, which later dissolve, or whether it be that the exudate itself within the alveoli has become so abundant that it completely closes the capillaries, the effect apparently is the same.

The later struggle for existence must take place outside of the area of infection, restricting greatly the possibility of active interference with the infected area, affecting greatly in a mechanical manner, possible action of antibodies given in large doses, and of sufficient amount, which if given in the early days of the morbid processes could have been of great benefit, but are now rendered useless from

their inability to reach the area in which the morbid processes are taking place which they were intended to influence.

The various pneumococci are specific, in that each variety possesses a capsule formed of a specific, separate form of polysaccharid and reaction to this specific capsule is the basis of the antibody produced by the body in its struggle against the pneumococcus. Each antibody can thus attack only its own corresponding type of pneumococcus, and the reactions, thus brought about are too intricate in detail to interest us here.

Broadly speaking, if the antibody can break through the resistance of the pneumococcus by removing in some way the capsule of the polysaccharid, the remaining body of the pneumococcus apparently readily undergoes phagocytosis, being engulfed by the leucocytes, and other cells. The reaction against the body proteins of the pneumococcus then easily takes place. The therapeutic serums thus possess large amounts of ready made antibodies to be poured into the circulation of patients overcome by pneumococcus infection, and who are unable to manufacture with sufficient rapidity adequate amounts of antibodies to protect themselves.

Vaccines, on the other hand, seem to produce a stimulation in the reticulo-endothelial system, and rely on the ability of the patient under their stimulation to produce sufficient antibodies to overcome the infection.

Recently Avery and Dubois have found a bacterium in bog water of a peat swamp, which produces an enzyme which will dissolve in the test tubes, or in the animal body, the capsule of Type 3 pneumococcus, which for a long time has been especially resistant to all forms of serum, and to the special defense reactions of the body. This enzyme has been injected into the peritoneum of mice, and into the body of rabbits following the intradermal infections of these animals. The solution of the capsule of the pneumococcus occurs also in the animal body, and recovery takes

place. Whether or not this can be applied to man is not yet reported; it adds, however, a new possible mechanism to the struggle of immunization of human beings during their attacks of pneumonia.

The serums so far successful in the treatment of pneumonia in man are those of Types 1, 2 and 7. Since the serum for Type 1 was first brought forward by Cole, Felton has contrived a method of separating the active antibodies in the serum from the parts unessential to immunization, and using this concentrated form of antibodies; improvement in the resulting care of Types 1 and 2 pneumonia has been distinctly more satisfactory.

There have been reported some 1200 cases of Type 1 pneumonia treated with the serum, and the mortality has been reduced from 31 to 20 per cent, and in one group reported by Cecil and Plummer, in which the serum was given in patients sick less than 3 days, there were 103 patients with a mortality of only 11.7 per cent against a control set of 97 cases with a death rate of 26.8 per cent. Thus in favorable cases the treatment is extremely satisfactory.

Of course it goes without saying that this necessitates that the patients be in the position where typing of the pneumococcus can take place quickly and early, and the precious early first 72 hours of the disease can be used for the giving of the antibodies, and the decision made whether it is Type 1 or Type 2 serum which must be pushed; all these give further advantage to the patient, producing this gratifying result.

There are certain differences between Types 1 and 2 pneumonia when treated with serum. In Type 1 in a certain number of cases when treated early the disease can be aborted, but this is not true in Type 2 pneumonia, although with the serum the Type 2 pneumonia patient feels better, is less toxic, and the fever tends definitely to be lowered, but the sudden cessation of the disease after the serum seems rarely to take place.

Sutcliffe and Finland in reporting some 239 cases treated with Type 1 serum, state that in patients coming in after the fourth day of the onset of the disease, there was no great difference in the average course of the disease between the treated and untreated patients. But in those patients coming in early with Type 1 pneumonia within 30 hours after being treated, there was a marked difference, and there was a distinct tendency to the further shortening of the average duration of the disease when measured with the average duration of the controls, and this tendency is the more distinctly marked the earlier the serum has been given.

Dr. Baldwin also reports satisfactory results in treating Type 2 pneumonia in the New York Hospital, in which he has reduced the mortality from 51 per cent down to 25 per cent.

While this was only in a small number of patients, 38 receiving treatment, and with 29 controls, it was over a period of 4 years, so that the antibodies for Type 2 pneumococci, as prepared by Felton, can be also used with marked benefit in this serious form of pneumonia.

Baldwin in dealing with Type 2 pneumococcus found that there was a marked benefit to be derived from the early treatment, in the first 72 hours, but contrary to the general opinion, records his experience that even in patients who came into the hospital very late with the disease of Type 2 pneumonia, and were seriously ill, when the antiserum was pushed, these patients responded well to the treatment, when the treatment was continued until all evidence of the symptoms of the disease had ceased, but under these circumstances large amounts of the antibody solution must be given. We are dealing with a treacherous type of pneumonia in the No. 2 type, which tends constantly to recur, after it has shown favorable indications of subsiding. Type 2 pneumonia seems to be the most serious infection of all the types of pneumococcus; its marked tendency to spread and recur, its high mortality, and the inability of the antibody to abort it in the early hours of

its infection, all combine to manifest the seriousness of this infection.

Of course the patient with bacteremia in pneumonia is a much sicker patient than one in which this condition does not develop. In the Type 2 pneumonia this bacteremia is liable to occur at some stage of the disease in 33 per cent of the patients, and Cole and his associates found that in such cases of bacteremia, the mortality rose as high as 73 per cent.

Cecil, Baldwin and Larsen demonstrated the pneumococcus bacteremia in 43 1/3 per cent of their series of cases, and the mortality in these was as high as 90.3 per cent.

The value of the serum is clearly shown by the fact, that when treated early the patients show a distinct tendency, not only to overcome the bacteremia when it is present early in the disease, but to prevent its occurrence. This sweeping statement I believe to be true as the many reports of the different observers are studied.

Neither serum, nor any other treatment is infallible in this regard, but the serums are effective in many cases that would otherwise be lost.

The dosage of serum as recommended by those who have used it abundantly, is that within the first 24 hours from 50 to 100,000 units of the antibody solution must be injected intravenously, depending upon the severity of the clinical symptoms. Both serums can be used in the early dosage, if the patient is severely ill, while one is waiting for the type to be tested; even though either serum may be useless, it is not harmful.

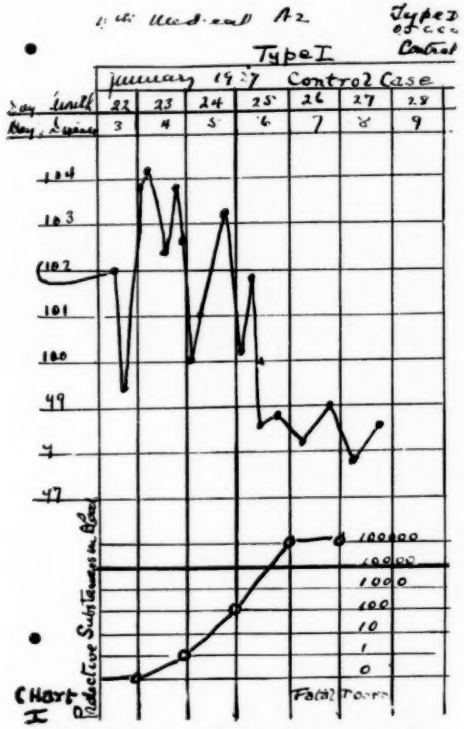
If on the following day the temperature is down, and the patient appears clinically much improved, at least 20,000 units should be given to maintain the balance. If the temperature remains high, and improvement has not occurred, from 50 to 100,000 more units should be given, and a similar daily dosage should be maintained until an im-

proved prognosis seems assured. These injections should be given every 8 to 12 hours.

Recently there has been put upon the market commercially a serum against Type 7 pneumococcus. As you know, there have been 30 new types of pneumococci separated by the New York Health Department from the collection of types in former Type 4, and their various antiserums have been developed in small amounts. This Type 7 occurs in about 5 per cent of the lobar pneumonias, and presents also the peculiarity of being hæmolytic. This serum has already been used by Dr. Bullowa in a small number of cases, the death rate of those receiving the serum was reduced to 6.6 per cent; the average mortality with this pneumococcus type previously has been from 25 per cent to 31 per cent.

For many years the medical profession had a strongly formed opinion that vaccines were meant for prophylactic use in medicine, and not for any curative effect, especially in acute disease. It was believed that if the dead bodies of bacteria were injected in the body during a sickness, there would be an overwhelming amount of toxins put into the body, that would surely increase the injury from which the patient was suffering. In pneumonia, this seemed to be particularly true, because of the acuteness of the disease, and the shortness of its duration.

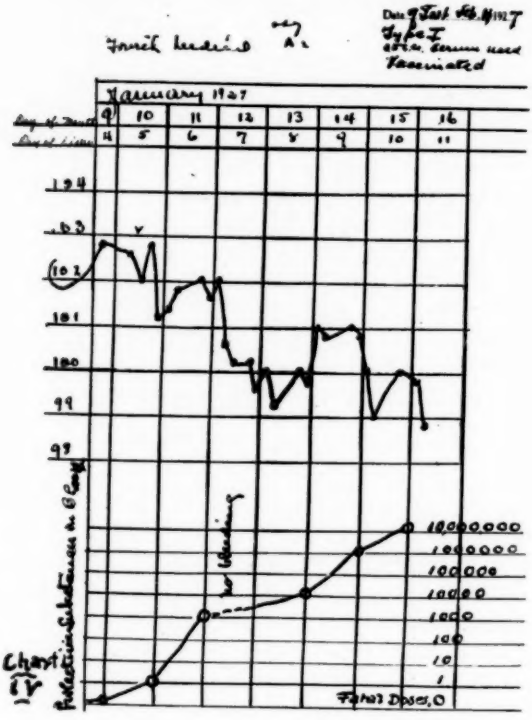
The work of Goodner shows that when a skin lesion is made in rabbits with virulent pneumococci, there are certain close pathological and clinical analogies to human pneumonia. It was found that, as in lobar pneumonia when the animals occasionally recovered, this recovery was accompanied by the appearance of antibodies in the blood. This had also been studied in human beings with lobar pneumonia, and it was known that these antibodies appear usually about the 5th day, and often at or about the crisis of the disease, which is, in the majority of patients, from the 7th to the 9th day.



Control Case: Showing Recovery With Increasing Production of Antibodies

If rabbits were given an intradermal inoculation of pneumococci 5 days after they had received the vaccine injections, they developed practically no disease locally, or systemically. If they were infected 3 days after the vaccine injection a typical course of fever occurred which on the following day subsided by crisis, and recovery took place. However in the rabbit, if the vaccines were given after the infection, the course of the disease was not materially affected.

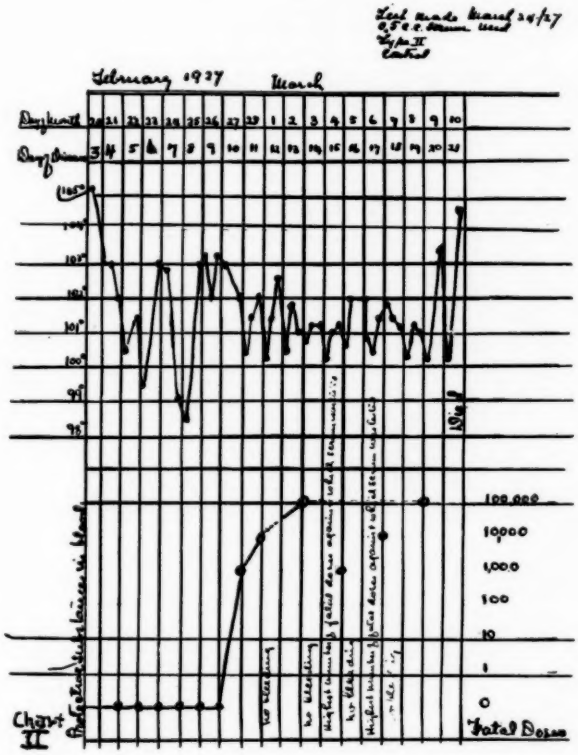
Man is much less sensitive to the pneumococcus than the rabbit, and in this fact lies the greater chance of recovery



Vaccinated Case: Showing Recovery With Unusual Production of Antibodies.

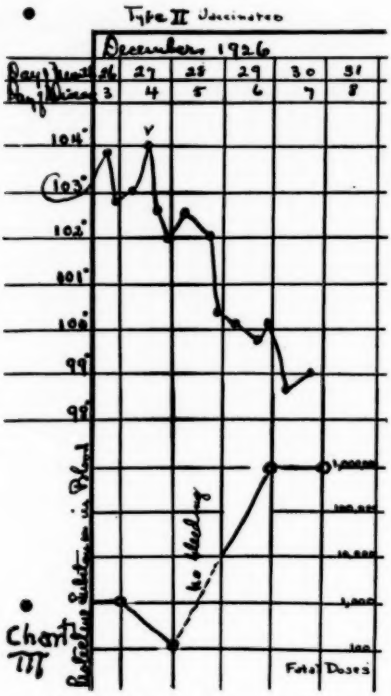
when once infected with pneumonia. In man there is also in the lung a continuous autolysation of the pneumococci, which stimulates the cellular defense of the reticulo-endothelial cells to produce the antibodies which appear in the blood at the usual time the infection is overcome.

To test the difference in the time of the appearance of the antibodies and their amount in the blood in vaccinated cases and in the controls, the blood of the patients was drawn as nearly daily as could be done, and the antibodies measured. As others had found these appeared usually



Control Case: Showing Death Although Abundant Antibodies were Present in Blood.

on the 5th or 6th day, not often on the 4th or even 3rd day of the disease, or else did not appear until the crisis on the 7th or 9th day, or even later in convalescence on the 10th or 15th day. The vaccines did not seem to stimulate an earlier appearance of the protective bodies in the blood. But after these bodies had appeared, they were noticeably more abundant in the blood of the vaccinated than in the blood of the controls. The average being 3.9 times greater in the 32 vaccinated patients than in the 29 controls.



Vaccinated Case: Recovery With
Vigorous Production of Antibodies

In one patient with Type 1 pneumonia and in two patients with Type 2 pneumonia, the specific antibodies were present in the blood of the patient on the third day, and in one patient with Type 7 the specific antibody was abundantly present on the second day of the disease before vaccines had been given.

In the early series of 38 patients we were confined to the Types 1, 2 and 3 of the pneumococcus in our study of the presence of antibodies. It was evident that in some of these patients of all three types no antibodies were developed in their blood, and these patients both vaccinated and controls recovered or died. Other patients died, and

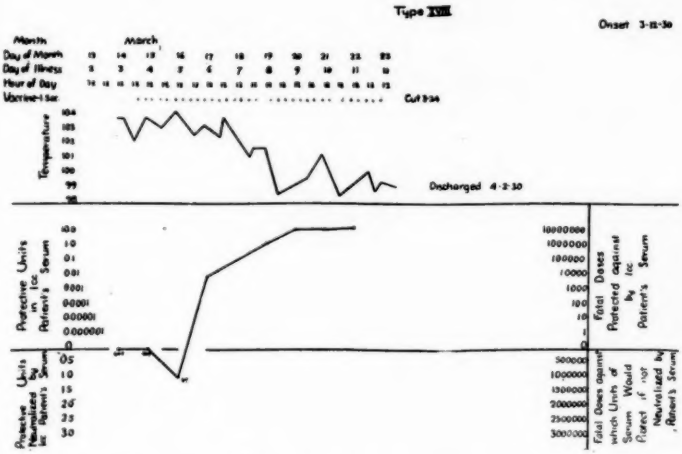


Chart XII: Vaccinated Case Curve of Presence of Antibodies in a Type XVIII Pneumococcus Pneumonia

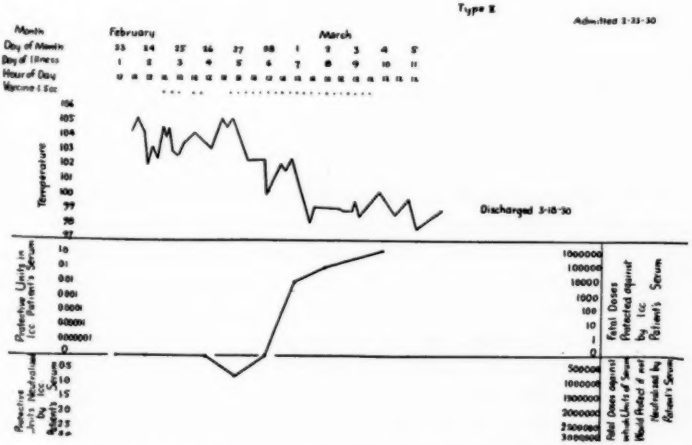
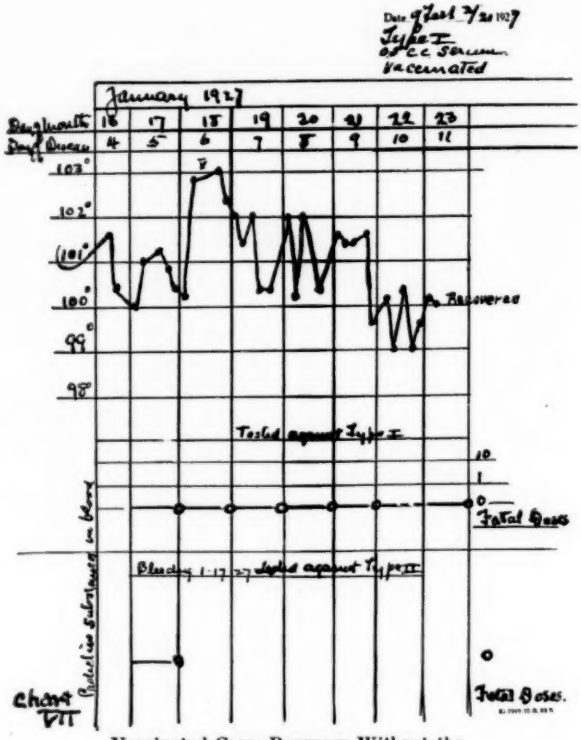


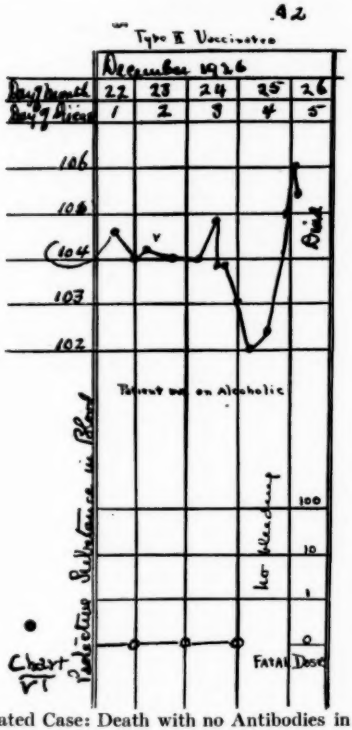
Chart XVI: Vaccinated Case Neutral Evidence of Antibodies, then Precritical Fall Followed by an Abundant Output of Antibodies at Crisis.



Vaccinated Case: Recovery Without the Appearance of Antibodies in Blood.

yet showed as high a reaction to the antibodies as many who recovered, and other patients who recovered showed a smaller amount of antibodies than some of those who died. This also occurred in both vaccinated and controls.

By 1930, 15 new members of the original group IV of pneumococci could be differentiated and tested for antibodies by specific sera. It therefore seemed desirable to test below the zero line of positive presence of antibodies in the blood to ascertain the variations in the intensity of the absence of protective substances below this zero line or the presence of some toxic substance. The charts VIII to XVIII demonstrate some of the curves thus found.



Vaccinated Case: Death with no Antibodies in Blood.

These charts show as we have said that in the use of these vaccines in pneumonia the protective bodies do not appear earlier in the vaccinated than in the controls, but when once they have appeared, they have been shown to be present in the blood in amounts 3.9 times greater in the vaccinated than in the controls. The presence or absence of antibody in the blood is not the complete answer to the cause of death, nor of recovery in any given case of pneumonia. Although in general the greater the power of the body to form the protective substances, the better the prognosis. Of course the fatal issue comes most frequently when the antibodies are lacking in the blood, but this shows the inability of the response of the protecting mechanism of the body to take place.

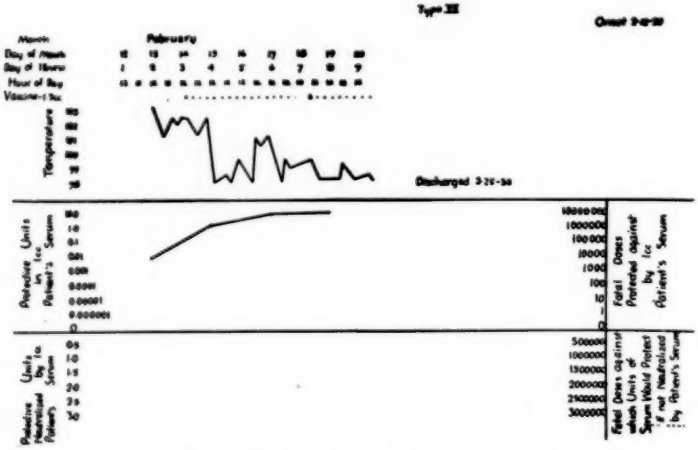

Type III
Onset 2-24-30
Month
February
Day of Month
Day of Illness
Hour of Day
Vaccine-1 Cc.
Temperature
Discharged 3-21-30
Protective Units in 1 cc. Patient's Serum
Fatal Doses Protected against by 1 cc. Patient's Serum
Protective Units by 1 cc. Patient's Serum Neutralized
Fatal Doses against which Units of Serum Would Protect if not Neutralized by Patient's Serum

Chart XI: Shows Presence of Specific Antibodies in Blood Before Administration of Vaccines.

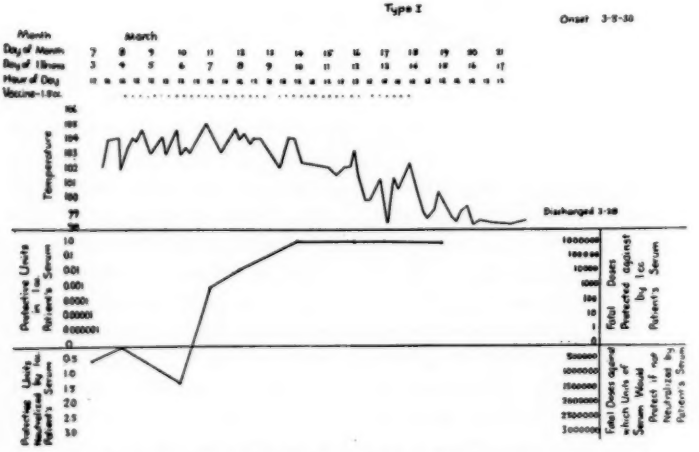

Type I
Onset 3-2-30
Month
March
Day of Month
Day of Illness
Hour of Day
Vaccine-1 Cc.
Temperature
Discharged 3-18
Protective Units in 1 cc. Patient's Serum
Fatal Doses Protected against by 1 cc. Patient's Serum
Protective Units by 1 cc. Patient's Serum Neutralized
Fatal Doses against which Units of Serum Would Protect if not Neutralized by Patient's Serum

Chart X: Vaccinated Case Shows the Curve of the Absence and Presence of the Protective Bodies in the Blood.

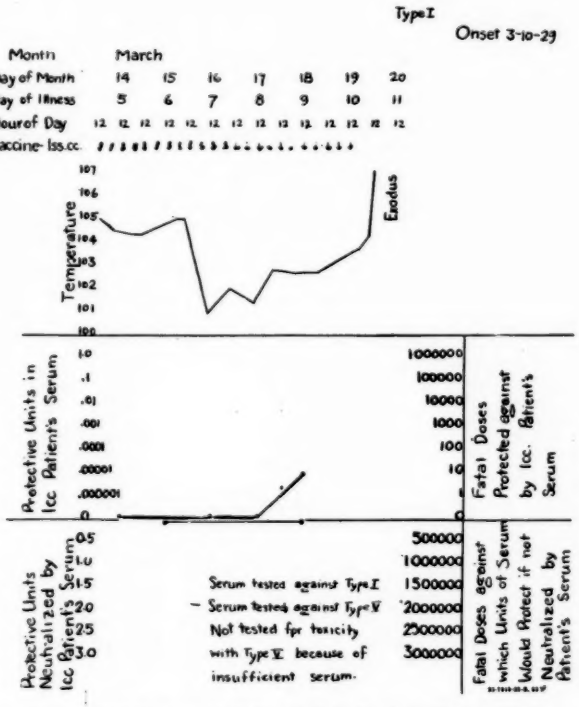

Type I
Onset 3-10-29
Month
March
Day of Month
Day of Illness
Hour of Day
Vaccine-1ss.cc.
Temperature
Exodus
Protective Units in 1cc Patient's Serum
Fatal Doses Protected against by 1cc. Patient's Serum
Protective Units Neutralized by 1cc Patient's Serum
Serum tested against Type I
Serum tested against Type V
Not tested for toxicity with Type V because of insufficient serum.
Fatal Doses against which Units of Serum Would Protect if not Neutralized by Patient's Serum

Chart. VIII Patient Had Reacted in Sputum Only Against Type I Pneumococcus. Only Type V Was Found in Heart Blood of Patient After Death. There Had Been a Double Infection, the Patient Dying from Type V.

The slides here shown you are from experiments made for me through the kindness of Dr. W. H. Park in the Health Department. The blood tested was from patients on the 4th Division at Bellevue Hospital. In the work for the positive finding of the antibodies, I wish to thank Miss Wilcox. For the work done for the finding of the negative side showing the amount lacking of protective bodies, I have to thank Miss Cooper, which appreciation I wish here to express.

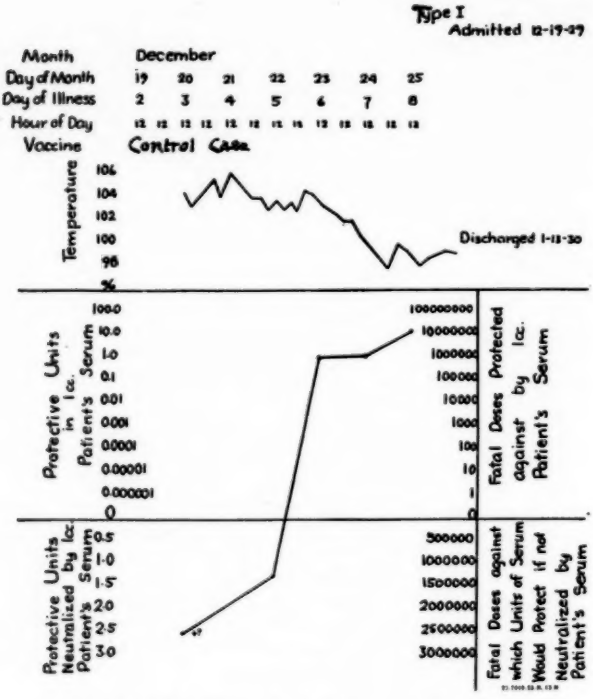


Chart IX Control Case: Shows Absence of Antibodies in Early Days of the Pneumonia, their Positive Appearance in Blood on Sixth Day and Unusual Amount by Eighth Day.

Looking at the results of the cases of the epidemic in 1918, in which the patient could receive early and active treatment of the vaccine, and especially in young people, the figures of Dr. Wynne and Dr. Dare show particularly valuable results, and in the 1,092 patients, there was a death rate of but 7.2 per cent; these figures are from patients treated with the vaccine in the earliest days of the disease, and of special young, vigorous persons.

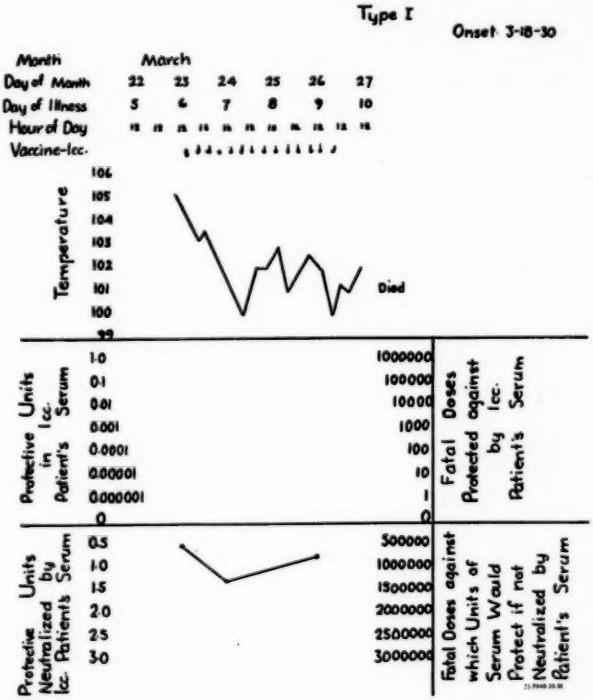

Type I
Onset 3-18-30
Month
March
Day of Month
22 23 24 25 26 27
Day of Illness
5 6 7 8 9 10
Hour of Day
Vaccine-lcc.
Temperature
106 105 104 103 102 101 100 99
Died
Protective Units in 1cc. Patient's Serum
1.0 0.1 0.01 0.001 0.0001 0.00001 0.000001 0
Fatal Doses Protected against by 1cc. Patient's Serum
1000000 100000 10000 1000 100 10 1 0
Protective Units by Neutralized 1cc. Patient's Serum
0.5 1.0 1.5 2.0 2.5 3.0
Fatal Doses against which Units of Serum Would Protect if not Neutralized by Patient's Serum
500000 1000000 1500000 2000000 2500000 3000000

Chart XIII: Vaccinated Case Failure to Develop any Antibodies.

In the other figures here recorded the figures of Dr. Sutton are from the use of vaccines in the Cook County Hospital in Chicago, and are more like the average occurrence in pneumonia in any big city, in which the majority of patients come in on the 4th or 5th day, but even then, there is still time to improve the mortality if the vaccines are used in a large number of cases. If vaccines are used in a small number of cases the effect is not sufficiently dramatic to give the impression that any possible improvement of the mortality between the vaccinated and the controls is due to anything but chance.

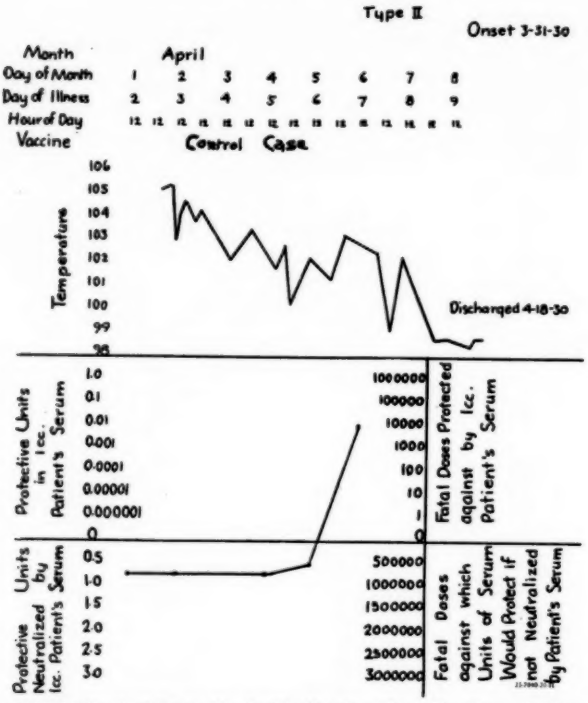

Type II
Onset 3-31-30
Month
April
Day of Month
Day of Illness
Hour of Day
Vaccine
Control Case
Temperature
Discharged 4-18-30
Protective Units in 1 cc. Patient's Serum
Fatal Doses Protected against by 1 cc. Patient's Serum
Units by Serum Protective Neutralized 1 cc. Patient's
Fatal Doses against which Units of Serum Would Protect if not Neutralized by Patient's Serum

Chart XVII Control Case: No Antibodies for First Six Days of Disease, then Sudden Precritical Rise of Antibodies.

The actual number may be small indeed, but when the figures taken as in my own wards where for 8 years the vaccines were used on the Fourth Division in Bellevue Hospital more or less continuously, and where you can see there were 474 vaccinated cases as against 482 controls treated simultaneously, taken as a mass there are actually 100 deaths more in the controls than in those vaccinated, the percentage mortality of all cases being 24 for the vaccinated, and 44 for the controls. Of course, as you know, this implies the old and the young, the non-alcoholic, and the alcoholic, the starved, and the well fed, and the vigorous and the weak. It is the severest test that can be put to any treatment, taking alternate patients

VACCINES IN PNEUMONIA

	Vaccine			*Controls*		
	Cases	Deaths	Per cent	Cases	Deaths	Per cent
Wynne 1919	669	51	7.7			
Fort Oglethorpe						
Lt. Col. Dare	423	29	6.8			
Total	1092	80	7.2			
Warren	23	4	17.3	24	7	29.1
Sutton	160	45	28.1	173	73	42.2
Lambert	474	115	24.	482	215	44.
Total	1749	258	14.	679	295	43.
	Vaccine cases			Controls		
Lambert	474	115	24.	482	215	44.
48 hours	97	9	9.3	97	39	41.2
72 hours	107	17	15.8	115	45	39.1
After 72 hours	270	89	32.9	270	131	48.5

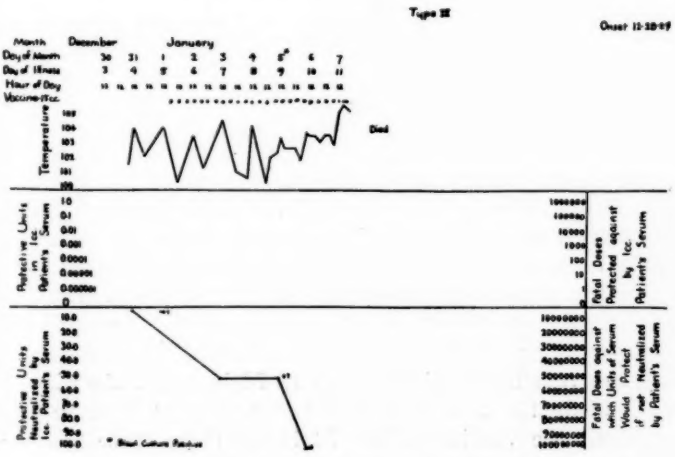


Chart XV: Vaccinated Case Shows intense lack of Protective Bodies in Blood.

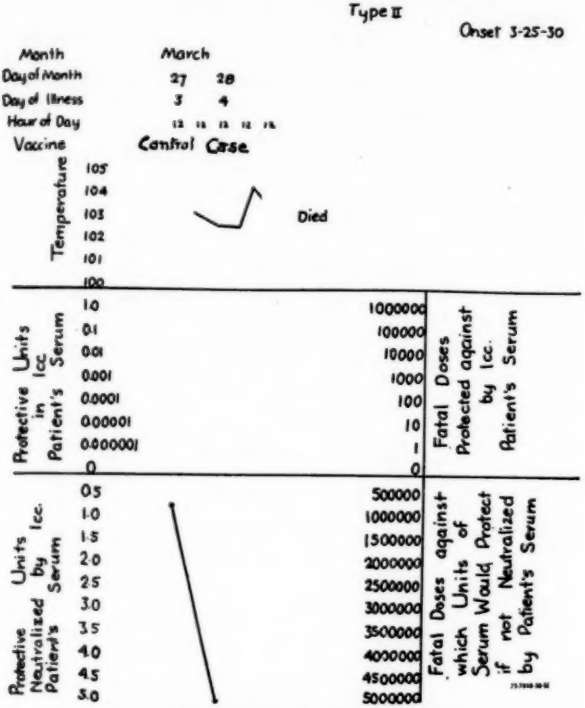


Chart XIV Control Case: Striking Fall of Protective Units in Blood

without any comment or choice, as they came into the wards suffering from pneumonia. To give any fair test of them it must be taken just as they occur. Separating those treated in the first 48 hours from those treated later there is a marked difference in results. In the 97 who had received the vaccines in the first 48 hours, there was a mortality of 9, *i.e.* 9.3 per cent; there were 107 patients receiving the vaccines in the first 49 to 72 hours of the disease with 17 deaths, a mortality of 15.8 per cent; in those who received the vaccines after 72 hours there were 270 patients with 89 deaths, 32.9 per cent. In 482 controls for those receiving the vaccines in the first 48 hours the mortality

was 41 per cent; for those receiving the vaccines in from 49 to 72 hours it was 39 per cent; and after 72 hours it was 48 per cent. Comparing the mortality of all the cases, 474 vaccinated against 482 controls, it is 24 per cent death rate in the vaccinated against 44 per cent in the controls.

This certainly is a sufficiently noticeable difference, and one that cannot all be due to chance, when we consider that the observations have been extended over 8 years from the years 1923 to 1931, and these have been years in which pneumonia has been abundant in New York, but in which the types and peculiarities of pneumonia have varied considerably; the total number of cases treated through this period of time, justifies the belief that chance has not entered largely into the results, that it indicates a definite value of the use of vaccines in pneumonia.

In the early cases this is particularly striking, and the vaccines give results as good as has been achieved with the monovalent serums. In the big cities where everything can be arranged for the immediate typing of the patient, as he is brought into the hospital, or as the disease occurs in private practice, and where the serum is immediately accessible, patients can receive their treatment with the most beneficial results, but that is only possible in the distinct minority of patients suffering from pneumonia. This strict specificity of type puts up an insurmountable barrier between those who can be treated favorably with serum, and those who can not, between Types 1 and 2 and 7 pneumonias, and all the other 30 odd types.

With the vaccines you have a preparation that is active, and which can favorably modify the mortality of the disease. They can be given here in the hospitals where everything is ready to receive the patient, and can be given immediately the diagnosis is made, long before the type of the patient is taken, and can be given out in the country where nothing is available, where it is not possible to type the pneumococcus, it is not possible to do anything except treat the patients with what one may be able to carry to him, with clinical aids and facilities lacking. They are of

as great benefit in Types 1 and 2 pneumonia as are the serums. They are of great benefit where the serums at present obtainable cannot be used.

In choosing your vaccines there is a great difference. Those to which heat has been applied, as Sutton has shown, are more or less inert, how much one specimen may be inert it is impossible to say, but heat is injurious to the activity of the vaccines.

In animal experiments using vaccines it has been found that in all probability those sterilized by formalin have been given the best substance that will leave the fullest activity in the vaccines. Tricresol used as the lethal agent for the pneumococcus is also of excellent value. There is a slight question whether or not it is as good as the formalin under all conditions. Vaccines must be kept up to high virulence by those who produce them, and the virulence of the cultures can deteriorate, and they are less active in their protecting powers when this occurs. I have no actual demonstrable proof of this beyond my clinical observation, but during my use of them I have become convinced that this is so.

The vaccines here used have been for the most part a mixture of pneumococcus 100 million to each c.c., streptococcus 100 million, influenza bacilli, micrococcus catarrhalis and staphylococcus aureus and albus each 200 million. In the pneumococcus are contained all forms of pneumococci. Personally in treating these pneumonia cases from 1 c.c. to 1½ or 2 c.c. of these vaccines have been given every 6 hours while the fever lasted, and when the temperature reached 99° F they have been changed to every 12 hours for 1 or 2 doses, and then stopped.

Other vaccines are on the market containing a higher amount of pneumococci, which may be of advantage.

There is a distinct advantage in having the mixture of the other germs, in that there is no question that the secondary infections of bronchitis and empyema can occur and the vaccination against these may also be obtained at the same time as against the pneumococcus.

The best place to give these hypodermic injections is in the gluteus medius, not in the coarse fibers of the gluteus maximus, which is very apt to be the place chosen, nor should the side of the thigh be used where the fascia lata is so thick, also an intramuscular injection is to be preferred to a subcutaneous. Another excellent place is back of the deltoid on the shoulder, or into the deltoid. Care should be taken not to push these vaccinations into the triceps muscle, which is so frequently done, because of the many fibrous bands running through the origins of that muscle.

There is no rise of temperature after these vaccinations, and in the majority of instances they do not leave any inflamed or tender spots. This may occur, however, and a wet dressing of Dobell's solution will soon stop the pain and any disagreeable itching resulting therefrom. In a few instances there has occurred a slight chilly feeling after these vaccines, and in that instance it is wise to reduce the dosage for that patient, but this has occurred in only 2 or 3 instances in many thousands of injections.

So much for the specific treatment of pneumonia.

There is no question that the use of oxygen in pneumonia has been of enormous benefit both to the comfort of the patient and improving his chance of recovery. If the modern oxygen tent, or the modern oxygen chamber cannot be obtained, one must struggle on with the tubes placed in the nostrils of the patients, and kept there by surgical plaster. This will improve the situation over no oxygen at all, and very materially improve it, but the tent in which the patient can lie and rest and be cared for, which is familiar to you all, is of the greatest benefit, but there is no question that in selecting it, one must obtain one that is large enough to keep it from becoming overheated by the feverish patient and have it large enough to seem to him that he is not shut in, and suffering from a closed and stuffy incarceration. In the ordinary tent first used, it was very noticeable in the hospital, that in many patients the sense of claustrophobia is strong, and it is

noticeable in the hospital that the average tent cannot be used in more than one third of the patients who need it the most. A half delirious, or fully delirious patient cannot be reasoned with; if he is alcoholic, he is less prone to the reception of new ideas than otherwise, and there is with these patients particularly, a large amount of fear connected with their suffering.

The tent with the metal sides jutting out like an old fashioned lean-to on the upper part of the bed, with the roomy space, is by all odds the most comfortable and practical.

Of course, if it is possible, an oxygen chamber is the most perfect thing for the proper oxygenation, in which the patient has no sense of fear, and it is large enough to give him no sense of suffocating or of being overheated, and his nursing goes on uninterruptedly.

In treating the pneumonia patient the great question of cardiac stimulation comes up.

Stone drew attention to the condition of the heart muscle after death; in statistics from some 2,000 autopsies, his figures make it evident that the heart muscle is found normal in about 1/4 of the cases. The parenchymatous degeneration may be present in as high as half the cases, and fatty degenerations and other forms may occur in 1/8th or less. Of course these figures vary with each observer, and the conditions vary as to whether the patient has died from acute disease, or whether there have been the septic complications of empyema, or lung abscess, etc. These figures probably mean that the heart may cease from functional breakdown of the circulation, and the equilibrium of the circulation be so disturbed, that the heart cannot go on. It may mean however, that in a diseased muscle with acute degeneration, one should be careful not to push cardiac remedies so that they themselves will act to disadvantage by direct poisoning, which the remedies may cause. This refers particularly to the use of digitalis; it has been very definitely proven by Niles, Wyckoff and

Norrie and others, that the full modern digitalization of patients in pneumonia is a dangerous thing to do, it jeopardizes the life of the patient in a distinct proportion of pneumonia patients. Small doses of the tincture of digitalis, so called tonic doses, in many instances seem to help the patient, and help the circulation, that is, doses of 10 to 20 drops, 3 times a day, or 4 times a day. If a sudden fibrillation of the heart occurs 1 or 2 c.c. of digifoline given intramuscularly, or intravenously, and repeated, if necessary some hours later, may be of very great benefit, but it can not be kept up as routine procedure.

McKenzie drew attention years ago to the fact that sudden appearance of extrasystoles in the cardiac rhythm in pneumonias, when the temperature was above 103, in a patient whose pulse beat had been previously regular, was of very serious prognostic import, and stated that he had never seen a patient recover in which this had occurred. This observation is unquestionably of value, as experience teaches, and the extrasystoles from too much digitalis, if this drug is being pushed, may occur, or it may be the beginning breakdown of the heart. That it is universally so, and always means a fatal termination to the patient is not true, for in a few instances I have seen it occur, and yet the patient recovered.

Many patients can go through their pneumonia without the necessity of cardiac stimulation. In some patients, as they begin their pneumonia, or as they arrive at the third or fourth day, the small doses of digitalis seem of real benefit to them, and it is better to have the tonic doses of digitalis already acting as the time of crisis approaches, than it is to wait, and suddenly have to give vigorous stimulation, if there is a tendency towards collapse.

Caffein as a cardiac stimulant is an excellent one. It has the disadvantage however, that although it stimulates the systolic contraction of the heart, it also stimulates the brain to wakefulness, and adds to the general discomfort of the patient, and its advantages and disadvantages must be weighed. Overstimulation of the hearts of the older

patients by caffein may itself produce extrasystoles and even fibrillation, and this must not be forgotten.

Sometimes when the heart is struggling to keep up the circulation, and is struggling with an evidence of lowered blood pressure, which comes both from the dilatation of the body capillaries and a lack of cardiac power, adrenalin is an excellent drug, and is best administered in what is termed a series; that is 5, 7 or 10 minims, or even 15 minims in severe cases should be given every hour for 6 or 8 doses; in that way often the heart will pick up its energy, and the equilibrium of the circulation becomes improved, and the patients receive it with marked benefit.

In sudden cardiac collapse adrenalin in single or repeated doses, even 10 to 15 minims every 15 minutes for 3 or 4 doses, is a remedy that is always wise to have on hand, and ready for use. These series of adrenalin can be given, and then stopped, and then taken up again a few hours later, if it seems that the necessity for them arises.

There is one drug over which there is still a great controversy as to the advisability of giving it in pneumonia. There is still a belief that it is a cardiac stimulant, although pharmacological experimentation definitely shows that it is not. I am speaking of alcohol, and naturally enter into a controversial subject at this point.

There is no question that previous to having pneumonia, excessive taking of alcohol increases the chances of the occurrence of pneumonia in the human body, and if alcohol has been taken in excessive doses, previous to the pneumonia, there is no question that the prognosis in pneumonia is made much worse. In 1,000 cases at Bellevue the death rate in alcoholic pneumonia was 66 per cent, in the non-alcoholic it was 29 per cent. This includes the young, and the middle aged and the elderly all together, so that it could be taken as a fair judgment.

There is no question but that alcohol dilates the capillaries of the skin as one of its early actions, and if the circulation is already suffering from excessive capillary

dilatation, and a weakened heart is struggling against this unusual distribution of blood, to add to it is certainly harmful. At first the feeling of the pulse after alcohol, is fuller, and the output of the heart seems to be increased, which may be distinctly advantageous, but it soon begins to paralyze the myocardium and diminish the output of the heart, which is a distinct disadvantage. In general the profession is using alcohol in pneumonia less and less, and its action has become recognized more and more as a detriment, rather than an advantage. If one is dealing with an elderly alcoholic, who is nervous from his previous excesses, it is wise to taper off his alcohol rather than cut him off quickly, but in young people in my opinion, it is wise to cut it off as quickly as possible, and to leave it out during the acute stages of the pneumonia. In elderly people it is true that those who are arteriosclerotic will improve under a ration of alcohol with their meals, but that is for a condition in relative health, and one in which we are dealing with arteriosclerosis, and not dealing with an acute infectious disease.

Alcohol as a stimulant to digestion, if given so that the amount of alcohol in the stomach does not exceed 5 per cent of the gastric content, will increase the digestion, and does improve the patient's nutrition, and is a valuable addition to his diet, whether he be young or old, if in convalescence he needs this drug.

It is claimed that alcohol is a food, and acts as a food, although it cannot be stored up, and will act as a sugar when given.

Very well then, wait until it is a question of feeding your patient in recovery, and don't poison your patient during the early stages of his acute disease. All this I know will be denied by many of my confreres, I notice however, that increasing numbers acquiesce.

This belief has grown upon me as my experience with pneumonia has increased. I was taught in my youth to give alcohol by all means, and to push it, and at that time

it was considered nearly criminal to omit alcohol in pneumonia. After many years of doing this, I could not see its benefit, and after trial of giving, and not giving, the beliefs that I have expressed have gradually developed.

An interesting experiment was made soon after I returned from the War in my wards at Bellevue, during the time there were many influenzal pneumonias. In one ward with Dr. Nammack, alcohol was used freely, in my ward it was not used at all. The treatment otherwise, and the procedures in the care of the patients were exactly the same under the same intern staff, there was no difference in the drugs used, or in the other procedures. There were 200 cases brought into each ward; the death rate in those treated with alcohol was 44 per cent; the death rate in the non-alcohol group was 16 per cent.

Often in the early stages of pneumonia cough is a very troublesome symptom; the characteristic pneumonic sputum is tenacious and thick and hard to bring up, and if there be any pleurisy added to this, each cough may bring an agony of pain. Frequently I find that codein is given to stop the cough, and to stop the pain at the same time, but the thickened sputum remains in the lungs. In the early stages of the bronchitis, or in patients in whom bronchitis is a marked symptom, or in whom bronchitis has developed first and pneumonia has developed subsequently, it is more beneficial to the patient to obtain a discharge from the bronchi, and increase the room for the admission of oxygen for the heart, than it is to leave the sputum tenacious and thick. The most successful drug that I have found for that, is small doses of antimony given in Brown's mixture, or in the wine of antimony. Frequently I have found that about 3-5 minims of the wine of antimony, and 3-5 minims of wine of ipecac, and a grain of ammonium chloride, and a grain of potassium iodide, given in each teaspoonful and given every 2 hours, will loosen up the sputum, will not bring on nausea and will act with the greatest benefit to the patient. In many of the cyanotic influenzal patients this mixture will

diminish the amount of sputum in the bronchi and clear the lungs, and loosen up the sputum, and if the patient can have a loose cough, when the sputum is easily raised he coughs less, he has less pain, he obtains more oxygen.

Now as to pain and the use of opium in pneumonia; when one meets a complaint of pleurisy, it is well to remember that pleurisy is not always in the area where the pain occurs. Remember the anatomy taught to you in your youth, remember that diaphragmatic pleurisy may affect the central portion of the diaphragm, and the pain will be in the top of the shoulder in the radiation of the phrenic nerve going out from the 2nd, 3rd or 4th cervical. The outer third of the diaphragm is supplied by the lower six intercostal nerves. Pleurisy close to the vertebral column which causes a pressure on the nerve in the short length of about 1 inch in which the nerve is unprotected by the groove of the rib as it comes from the vertebral foramen, and pressure on the nerve at this point will cause pain in its lateral branch in mid axilla, or cause pain in its anterior branch on the chest or abdominal wall. This is very frequently seen in children, and not uncommon in adults. One frequently finds poultices put on the abdomen to stop the pain that is occurring from the pleurisy in the back. The best thing to stop pain is a good thick flaxseed poultice, the first to contain mustard of about 1/8th of the poultice; this poultice to be kept on for 2 hours, and then followed by another flaxseed poultice without mustard, and that kept on for 2 hours, and then removed, and then cease all poulticing, and it is not to be repeated for 8 or 10 hours. In this way there is little disturbance of the patient, and frequently it entirely clears up the pain.

Of the opium preparations to stop pain codein mixture with some analgesic will frequently do it, and do it better than morphine, and remember in giving codein, that 1 grain is equal to 1/8th of a grain of morphine in its effects, and will stop pain equally well with some analgesic as a few grains of sodium salicylate and aspirin, or given alone without these.

Morphine for pain, in pneumonia in my experience is not a safe drug, and it has puzzled me for many years as to the probable reason for it.

I have seen patients suffering pain, given an injection of 1/4 of a grain of morphine, and in spite of their breathing comfortably at 24 or 25 a minute, and the pain relieved, they died suddenly like a snuffed out light. I was greatly impressed with this as an intern, and when I had my own responsibility to go on, I have ceased giving it.

Recently it appears that morphine paralyzes the action of the sympathetic adrenal system, and interferes with the production of the sugar from the liver when the call of the adrenal makes this demand in the struggle for existence.

I have wondered if in interrupting or injuring this system we do not break a very delicate balance when most needed for protection of the body. I offer this guess as a possible explanation, as I know of no other, but frankly I have a fear of morphine in pneumonia. Codein does not act that way, codein does not paralyze the respiratory center, it diminishes the action and acts more quickly on the coughing center than morphine does. For these reasons, it is better to use it in pneumonia, than to use morphine. Codein given in 1/12th to 1/10th grain doses and frequently repeating, *i.e.,* every 10 to 15 minutes for several doses, will control cough much better than if given in 1/4 or 1/2 grain doses.

With restlessness and sleeplessness we come to a real problem; there are many hypnotics on the market which ordinarily can be used; the old fashioned trional, if given in a little warm milk in 5 or 10 grain doses, with a grain of codein is an excellent hypnotic, if there is pleuritic pain. Many of the barbituric acid preparations are used, and in ordinary people who are not alcoholic, they are of benefit, and if they do happen to pervert the personality, and make the patient unreasonable, they can easily be stopped; but in dealing with the alcoholic, if you push your barbituric

acid drugs, and all alcoholics need huge amounts of hypnotics to affect them, you are sure to make them more and more resistant and resentful, and increase the restlessness, and make the patient more and more of an unmanageable problem. It is often difficult to know what to give them. Paraldehyde given in a little orange juice to kill the rankness of its taste, may be very efficacious, 2 drams, and repeat in 1 or 2 hours if necessary; it does no harm to the pneumonia patient, and may be of great benefit. I have seen paraldehyde injected intravenously in 30 to 60 minim doses, sometimes with benefit to the patient. I have seen as much as 4 or 5 drams given intravenously, and have no effect whatever on the patient.

There are a few patients you must remember that paraldehyde excites; in such cases it increases delirium, and does not act as a hypnotic, and this action is not rare. At times some of the barbituric acids intravenously have been used; in most of these, as sodium amytal, the line between safety and danger is so narrow that it is not safe to use them.

The most satisfactory remedy seems to be the old fashioned chloral and bromide, used as a mixture, in which there are 15 grains of chloral and 30 grains of sodium bromide used at a dose, to which you must add some capsicum and ginger to be sure that absorption of the medicine takes place after it is in the stomach, for often an alcoholic gastritis inhibits absorption.

When this is given, you can give by mouth or by hypodermic one or two grains of codein with each dose of the above B and C mixture. This can be given and repeated in an hour if necessary, and if persisted in you can quiet the vast majority of your alcoholic patients so that they are manageable and quiet, and sleep comfortably.

With codein, of course you will obtain constipation, and the pneumonia patient must be watched to see that either with an enema or through colonic irrigation, the bowels are moved daily. Often it is wise to add some mild cathartic to help bring this about. The old fashioned idea of

always beginning a case of pneumonia with a thorough calomel purge is not so generally accepted as formerly, but it is wise in the early stages of pneumonia to see that the bowels are properly moved each day.

In feeding the pneumonia patient, fruit juices are most grateful to the patient, and supply him with abundant sugar, and abundant vitamins. By fruit juices I mean orange juice, grape fruit juice, or grape juice, and to any one of these, if pleasant to the patient, lemon juice can be added. The amount of these to be taken need not be limited, and very frequently they add to their benefits that of cathartic action. A plain milk diet is apt to leave a large residue in the bowel, and is apt to add to the abdominal distension. Of course a mixed soft diet, toast and bread and butter, and milk and meat broths and eggs are all of benefit.

Pneumonia patients should be given abundance of fluid to keep their kidneys acting, and also to supply the fluids necessary for the excessive sweating with which they are apt to be annoyed.

As far as the temperature of pneumonia patients is concerned, they do not need a reduction of their temperatures, except as it causes discomfort if it rises too high, that is above 105. By too high, I mean too high for their comfort, I do not see that the height of the temperature necessarily does any harm to the patient. The oxidation products and the break down in the equilibrium of heat lost and heat production, does not seem to occur in pneumonia to such an extent that it brings on unconsciousness. That from our experience in sun stroke does not seem to occur until temperatures reach the height of about 108 or 109, these heights I have never yet seen in pneumonia.

If the patient is uncomfortable alcohol baths may help him, but that the height of the fever is something necessarily to be reduced, and is a danger per se, I do not think is accepted today. As your patient convalesces do not let him get out of bed until about a week after his tempera-

ture falls to normal, and if his lung does not resolve quickly, be careful how you push him in his convalescence. In youthful and vigorous patients there are cases in which a prolonged unresolved lung may be best cleared up by out of door existence, and moderation in exercise, but it is well to let the patient rest in bed until the pneumonic exudate is resolved. Often some form of creosote in delayed resolution as guaiacol or other preparation of creosote will frequently help the dissolution of these exudates.

There are many small things to be done, and many things to be given to the pneumonic patient that come under the head of good nursing, and I think this good nursing looms large in the good care of the pneumonic patient, and I think good nursing not only improves the comfort of the patient, but improves the prognosis of his recovery.

THE HEALTH AND WELFARE RESOURCES OF THE CITY FOR THE PHYSICIANS

Mr. William Hodson
Executive Director, Welfare Council of New York City

Abstract of an Address before the Academy of Medicine, March 2, 1933

The City of New York and the nation as a whole are engaged in a gigantic effort to provide millions of people with food, shelter, and clothing and at the same time to maintain at least a decent minimum of health care, which includes the treatment of sickness and disease and the prevention of illness and physical breakdown. Relief and welfare are now more than ever intimately bound up with the health of the nation. Unless the necessities of life can be assured to those who are out of employment and without resources, it inevitably follows that exposure, malnutrition, and lack of medical attention will undermine the strength of our people and disease will spread rapidly. We have been told that for the population as a whole there has never been so little illness and death as at the present time but it must be remembered in connection with this statement that the rates of sickness and mortality represent an average for the population as a whole. Perhaps the majority of our people are still able to take care of themselves and to purchase health care, but a large and rapidly increasing proportion are unable to do this and the rate of sickness and death among the unemployed is a matter of growing national concern. It must be remembered, moreover, that the results of inadequate food, delayed medical attention, worry, and malnutrition may not be reflected immediately in the accounting for sickness and death, but these factors will play an important part in undermining the health of our people as time goes on. That is why constant vigilance in health work now is the price of future safety.

The objectives of public and private medical and health work are two-fold. First, to treat and cure a disease, and second, to prevent disease so far as possible and promote

healthful living through education and the control of environmental factors. In 1929 the Welfare Council of New York City published the results of a study of health work under the title "A Health Inventory of New York City". This Inventory undertook to classify and describe the various public and private health services which are provided in this community, emphasizing particularly those services which aim to prevent disease. In the opening chapter of that Report it is pointed out that more than 125,000 persons are sick in bed every day of the year and at least twice that number in addition are incapacitated although not actually ill. At the time of this Report about 70,000 persons in the city died each year, many of them from sickness that might have been prevented or postponed; 7,000 of this total number were babies. It was further estimated that the annual loss in wages due to absence from work caused by illness was at least $75,000,000, and that there was a still larger loss due to diminished productivity and loss of future earnings through chronic illness and premature death from preventable causes. It was further estimated that the total amount of money spent by the citizens of New York for the care of disease was in the neighborhood of $150,000,000 a year. For the treatment of disease primarily we had 11,000 physicians, 12,000 nurses, 6,000 dentists, and more than 200 hospitals and clinics operated both by the city and by private or voluntary organizations.

If comparable data and estimates were available for the year 1932 there would no doubt be changes in these figures but they serve nevertheless to indicate something of the extent of illness and death, its cost, and the general character of the service provided. For the treatment of disease we rely upon the physician, the nurse, the hospital, and the clinic. A considerable part of this service is paid for by the recipient in the normal relation between doctor and patient, or between hospital and patient. On the other hand, a very substantial part of the cost of the treatment of disease is borne by the public and private hospitals, clinics, and visiting nursing services, not to mention the

unremunerated services of the physician. It is imperative that funds continue to be provided through public taxation and through private philanthropy for the maintenance of the organized services which treat and cure disease since the present situation threatens both to restrict hospital, medical, and nursing care and to reduce its efficiency.

The same situation obtains with regard to the public and private services which have been established to prevent disease and to promote good health. In 1929 there were 300 agencies of which the largest was the Health Department furnishing these organized preventive health services in the city. Apart from the preventive health work which the physician renders in connection with his private practice, there are four ways in which the prevention of disease is undertaken. First, there are the clinics which means a doctor working under organized auspices and serving those who come for treatment and advice. Second, there is the home visiting by the public health nurse and the social worker who bring personal attention, advice, and education to the family in the home. Thirdly, there is health education in the form of literature, private conferences, radio broadcasts, posters in street cars, lectures, and information provided through the newspapers. The fourth type of health prevention is through institutions such as hospitals, convalescent homes, and health demonstrations. These varied types of preventive work serve the child from infancy and through the primary school years and the key note is to keep the well child well by discovering as early as possible any physical conditions which, if promptly remedied, will avoid serious illness or defect. The importance of maternity hygiene is stressed through clinics, visiting nurse services, and other organizations which provide pre-natal and post-natal care for mothers. Major emphasis has been laid upon the control of tuberculosis through a variety of clinics, institutions, and other services. The control of venereal disease, of heart disease, and of cancer all occupy the attention of public and private organizations directly concerned with these problems. Here again the need of both public and private support to maintain these preventive health

services is pressing and the failure to secure the necessary support will ultimately be reflected by an increase in sickness and death.

In suggesting ways and means by which the physicians and the public generally may utilize the relief and health resources of the community in behalf of those who are in need, it would obviously be impossible to list and classify all of the organizations and institutions which engage in relief and health work. However, it is possible to make some concrete suggestions as to the major sources of help and assistance. First let me deal with the subject of material relief. Under the provisions of the State Emergency Relief Law, known as the Wicks Law, the city of New York has set up a Home Relief Bureau under the Department of Public Welfare which has branch offices and application centers in different parts of the city. Relief is given to individuals and to families who have been residents of the State of New York for two years and who are without resources sufficient to maintain themselves. This relief is given not in cash but in kind. In other words the Home Relief Bureau issues food tickets which entitle the holder to secure a balanced ration of food at regular intervals from the established grocery stores in his neighborhood. By far the largest item of relief given consists of food. Rents are paid on occasions and the payment is made directly by the Home Relief Bureau to the landlord. A relatively small part of the relief expenditure goes for clothing and here again the Home Relief Bureau issues an order on the merchant for the clothing which is to be provided for the family. In other words no cash passes from the Home Relief Bureau to the family. Food, clothing, shelter, and other necessities are given on orders issued to the family by the Bureau. In the month of January the Home Relief Bureau spent slightly in excess of $2,000,000 and cared for more than 74,000 families. Now the important point to be noted in connection with city home relief is the fact that by reason of inadequate funds little or nothing could be provided for health care although it was known that thousands of families were unable to pay for

the services of a physician or to cover the costs of nursing and hospital care. The Temporary Emergency Relief Administration of the State of New York came to the rescue and through appropriations made by it assisted the Home Relief Bureau to begin an experiment in providing medical and nursing care to those families in urgent need of it. For this purpose the State Relief Administration appropriated $75,000 in December and January and appropriations have been made for February and March to carry this work along. The plan of operation was devised by the special Committee on Medical Care of the Coordinating Committee on Unemployment of the Welfare Council which cooperated with the Home Relief Bureau, the Department of Health, and the County Medical Societies in determining upon the proper procedure. In brief, the plan of procedure divides the city roughly into zones corresponding to the police precincts and physicians who are willing to care for patients referred by the Home Relief Bureaus are paid at the rate of $2.00 a visit for all services rendered. The nurses who are cooperating in the plan are paid at the rate of $1.00 a visit. At the present time there are thirty physicians and 170 nurses who have rendered service under this program and more than 4,000 patients have been given medical and nursing care. Physicians who are willing to be listed as available for this service can send their names to the Secretary of the Medical Society of the County of New York indicating the times at which they are free to make visits on the call of the Home Relief Bureau. The physicians who signify their willingness to do this are listed by zones throughout the city and called in rotation. Dr. Hugh Hodge is in charge of the medical services and he has his headquarters at the Department of Health. Miss Ruth Lavin is in charge of the nursing service and she also has her office at the Department of Health. Although it should be emphasized that this project is not under the direction of the Health Department itself. It will be understood, of course, that the extent to which this medical and nursing service can be rendered is strictly limited by the appropriations which are now or may hereafter be made. There is

no commitment at the present time as to the extent and duration of these appropriations. The whole project has been set up for the time being on an experimental basis.

Another significant demonstration in the health field which was made possible by the Temporary Emergency Relief Administration is under the supervision of Dr. Margaret Barnard of the Bellevue-Yorkville Health Demonstration with a staff of five physicians and 70 nurses all of whom were previously out of employment. This Demonstration consists in the examination of a selected group of Porto Ricans and Negroes who were referred by the Home Relief Bureau supervisors as being in need of examination by reason of actual or suspected tuberculosis. 11,000 individuals have been X-rayed and while the results of this process are not yet finally tabulated the experiment has gone far enough to indicate that there is a considerable amount of tuberculosis revealed by the X-ray examinations. With the completion of these examinations for the group selected, follow-up work is now being done in order to put the patients in contact with clinics and other institutions which can provide the appropriate care.

Referring again to material relief and other assistance there are eleven privately organized family welfare societies in the five boroughs of the city that share in the funds of the Gibson Committee. These societies provide cash relief to individuals and families that are accepted for care and in a general way the private agencies select their families on the basis of the need for help and assistance in addition to material relief selecting those families for whom constructive work in the way of rehabilitation can be profitably undertaken. This is to be distinguished from the work of the city Home Relief Bureaus which are concerned primarily with material relief alone. The private family welfare societies are under various auspices. Some are maintained by Catholic organizations, others by Jewish, and still others are non-sectarian in their control and activity. If no one of these organizations is known to you perhaps the simplest thing to do would be to call the Information

Service of the Welfare Council which can put you in touch with the proper agency to handle the family or individual with whom you are in contact.

The care of homeless persons and beggars on the street has presented some difficulties, particularly because by responding to an appeal for alms one is only making matters worse. There are, of course, many and varied facilities for the care of the homeless including the Municipal Lodging House, the Salvation Army, the Bowery Y. M. C. A., and many others. In order to correlate the work of these organizations to give the citizen an opportunity to help the homeless man or woman without giving alms, there has been set up a Central Registration Bureau for Men at South Ferry to which all homeless persons can be sent with the knowledge that they will be referred to the appropriate agency for care. A similar Central Registration Bureau for Women has been set up in connection with the Emergency Work and Relief Bureau at 297 Fourth Avenue.

You will probably be interested to know how duplication and overlapping is prevented among these varied relief agencies that I have named and many more which I have not named. The answer is the Social Service Exchange operated under the auspices of the Welfare Council. All the public and private agencies report to this central clearing house the individuals and families that are known to them and last year more than 600,000 clearances of this sort were made. It is thus possible for any agency to know whether a particular family is known to any other agency. By this means duplication in relief giving has been reduced to a minimum.

Now turning to the health services which are available for persons in need, may I call your attention to the 96 social service departments of public and private hospitals which are organized to serve the patients of the hospital and its clinics. As you are undoubtedly aware these social service departments provide follow-up-care both inside and outside of the patient's home interpreting the instructions of the physician, assisting in carrying out his recommen-

dations on hygiene and diet, and performing a variety of services which make it possible for the patient to carry out his treatment. Then there are the visiting nurse services of the city notably, the Henry Street Nursing Service with headquarters in Manhattan, and the Visiting Nurse Service of Brooklyn which provide pre-natal and post-natal service to mothers in their own homes and general bedside care for the sick. These nurses are doing an indispensable public service and in the doing of it are working in close cooperation with the family physician wherever there is one.

The Information Service of the Welfare Council has had numerous inquiries with regard to convalescent care. In this connection may I refer you to the Hospital Information and Service Bureau maintained by the United Hospital Fund which in addition to answering questions on hospital care provides information about convalescent homes, the vacancies which are available in the various homes, and the requirements for admission.

In the field of care for the tuberculous, the New York Tuberculosis and Health Association is a center of information concerning institutions and clinics for tuberculous patients. This service can also direct the physician to the various diagnostic clinics which have been set up for tuberculous patients who can pay a moderate fee to the physician but who are unable to afford the services of a specialist. These clinics provide expert diagnosis including X-ray. They receive patients only as they are referred by physicians and the reports are made back to the physicians themselves and not to the patients.

In connection with care for children the Children's Welfare Federation can provide information concerning child health, maternity, and nursing services and care for children while the mother is in the hospital.

The Association for the Aid of Crippled Children arranges for education, summer care, and follow-up on medical treatment for crippled children from birth to sixteen years of age. There are a variety of services provided

for the blind, the hard of hearing and the crippled and disabled. Information with regard to these services can be secured through the Information Bureau of the Welfare Council.

Nothing has been said up to this time with regard to the growing problem of mental health. It is of course impossible to determine fully the effects of the depression with its consequent unemployment upon the mental and emotional make-up of those who are without funds and in a state of agonizing uncertainty. The New York City Committee on Mental Hygiene is a valuable source of information with regard to the mental hygiene services which are available and it serves as a clearing bureau on questions concerning mental health and the organization of clinics to deal with mental and emotional problems.

All of the foregoing is but a hasty and incomplete survey of the field. Perhaps it will serve to indicate the character and extent of the varied public and private services which are available and some of the major organizations to which the physician can turn for help on behalf of his clients who are in need. In reviewing the health services of the city I have not begun to do adequate justice to the work which is being done by the Health Department of the City of New York under the direction of Commissioner Wynne. With much of that work the members of this body are thoroughly familiar and a complete exposition of the many services rendered to the city by this Department would require an evening by itself. Suffice it to say that this city is more than fortunate in having a man of Dr. Wynne's qualifications at the head of the official health services of the community.

FELLOWS DESIGNATED AS SPECIALISTS

The following named Fellows of the Academy have been accepted by the Committee on Fellowship for designation as specialist in their various fields and have been approved as such by the Council.

Dermatology and Syphilology

Frederic H. Dillingham	Oscar L. Levin	Charles M. Williams
Joseph J. Eller	Edward R. Maloney	Fred Wise
Howard Fox	Max Scheer	

Medicine

Anthony Bassler	William Goldring	Joseph M. Marcus
Carl Boettiger	David Greenberg	Milton J. Raisbeck
Samuel Bradbury	Hubert V. Guile	Milton B. Rosenblüth
Arthur F. Chace	Medwin Leale	Homer F. Swift
Frank B. Cross	Robert L. Levy	Cornelius J. Tyson

Neurology and Psychiatry

Samuel T. Armstrong	Leland E. Hinsie	Herman Selinsky
Leo M. Davidoff	George H. Hyslop	George Stevenson
Sol W. Ginsburg	Bernard Sachs	Harry M. Tiebout

Obstetrics and Gynecology

David N. Barrows	Morris Leff	Walter B. Mount
Walter T. Dannreuther	Howard E. Lindeman	Francis W. Sovak
Frederick C. Freed	John F. McGrath	Wilbur Ward
Alfred M. Hellman	Max D. Mayer	Solomon Wiener

Ophthalmology

W. Guernsey Frey, Jr.	Joseph Levine	Mark J. Schoenberg

Orthopaedic Surgery

Joseph Buchman	Robert K. Lippman	H. D. Sonnenschein
Robert Edw. Humphries	Frederick J. Matthews	Armitage Whitman
William H. Irish	Seth Selig	

Otolaryngology

Richard T. Atkins	Thomas J. Harris	John M. Loré
James W. Babcock	Walter L. Horn	Samuel McCullagh
Cornelius G. Coakley	Lee M. Hurd	Percy E. D. Malcolm
James F. Faulkner	David H. Jones	Jacob L. Maybaum
Henry Hall Forbes	John D. Kernan	Wm. Wallace Morrison

Pediatrics

Adolph G. De Sanctis	Charles Herrman	Bret Ratner
Ten Eyck Elmendorf	Alfred F. Hess	William St. Lawrence
Harold Herman	F. Elmer Johnson	Philip M. Stimson

Radiology

Leon T. LeWald	William H. Stewart	

Surgery

Milton Bodenheimer	Edward V. Denneen	Lucius A. Salisbury
Ira Cohen	Carl Eggers	George H. Semken
Ralph Colp	Eugene H. Eising	De Witt Stetten
Condict W. Cutler, Jr.	Henry H. Ritter	Arthur S. W. Touroff

Urology

Clarence G. Bandler	George W. Fish	Walter H. McNeil, Jr.
George F. Cahill	Edward F. Kilbane	Julius J. Valentine

SIXTH ANNUAL GRADUATE FORTNIGHT

A Postgraduate Two Weeks Devoted to Metabolic Diseases

OCTOBER 23 TO NOVEMBER 3, 1933

"DISORDERS OF METABOLISM"

The Program Comprises

AFTERNOON CLINICS, EVENING MEETINGS, AND A SCIENTIFIC EXHIBIT

I. HOSPITAL CLINICS

Specially arranged clinical programs will be presented in fifteen of New York's leading hospitals. Among the clinicians who will participate are:

F. M. Allen	Ella Fishberg	Herman Lande	Irving Pardee	H. J. Spencer
A. Alving	R. T. Frank	J. F. Landon	H. S. Patterson	H. J. Stander
B. I. Ashe	J. M. Freston	J. S. Leopold	Edward Tolstoi	Alfred Stengel
George Baehr	L. F. Frissell	Joseph Lintz	Maurice Pomeranz	Walter Stenson
F. H. Bartlett	Jacob Geiger	R. F. Loeb	E. P. Ralli	J. E. Sutton
William Bierman	H. R. Geyelin	L. S. Loizeaux	C. P. Rhoads	H. C. Thacher
Sol Biloon	G. M. Goodwin	T. T. Mackie	John Rogers	Frederick Tilney
H. L. Blumgart	R. H. Halsey	David Marine	M. A. Rothschild	Abraham Tow
A. S. Blumgarten	W. P. Healy	A. T. Martin	E. B. Sanford	J. J. Valentine
R. E. Brennan	I. W. Held	Howard Mason	B. J. Sanger	D. D. Van Slyke
Harlow Brooks	G. W. Henry	W. S. McCann	Bela Schick	Martin Vorhaus
W. B. Castle	E. L. Hunt	A. S. McQuillan	Kaufman Schlivek	Bruce Webster
H. W. Cave	Peter Irving	H. D. Meeker	Herman Schwarz	Davenport West
A. E. Cohn	Leopold Jaches	H. W. Meyer	J. R. Scott	W. C. White
B. B. Crohn	F. E. Johnson	Henry Milch	Ephraim Shorr	R. M. Wilder
F. M. Donehue	J. E. J. King	H. O. Mosenthal	J. J. Short	W. R. Williams
G. S. Dudley	S. E. King	B.S.Oppenheimer	P. E. Smith	I. S. Wright

II. EVENING SESSIONS

The subjects and speakers at Academy meetings will be:

Total energy exchange in relation to clinical medicine ....Eugene F. DuBois
The metabolism of fever.....Harold E. Himwich
Metabolism in hyperthyroidism and hypothyroidism.....Walter W. Palmer
The surgical treatment of hyperthyroidism.....Frank H. Lahey
Acidosis and alkalosis.....Donald D. Van Slyke
Mineral metabolism.....Joseph C. Aub
Fluid distribution and edema.....A. Ashley Weech

Dehydration and medical shock.....Dana W. Atchley
Congenital anomalies of metabolism with special reference to cystinuria and myopathies.....Erwin Brand
On the disturbances called "gouty" and their treatment....Emanuel Libman
Round Table Conference on diabetes mellitus:.....Rollin T. Woodyatt, Priscilla White, Nellis B. Foster, Herman O. Mosenthal, William S. Ladd, H. Rawle Geyelin
Clinical and biologic considerations of obesity and certain allied conditions.....Albert A. Epstein
A critical estimate of the value of laboratory procedures in disorders of metabolism.....John P. Peters
General review of our present knowledge of vitamins.....H. C. Sherman
Disorders due to moderate deficiency of vitamins.....Samuel W. Clausen
Discussion of last two papers.....Alfred F. Hess and Lafayette B. Mendel
The influence of the diencephalon and hypophysis upon general autonomic functions.....Wilder Penfield
Non-diabetic ketosis in children. Dehydration in infants...Oscar M. Schloss
Hyperparathyroidism and its relationship to diseases of bone.Henry L. Jaffe
Metabolic disturbances in relation to the teeth.....Charles F. Bodecker

III. SCIENTIFIC EXHIBIT

An extensive scientific exhibit bearing upon the various aspects of the general subject will be held at the Academy concurrent with the Fortnight and for an added week thereafter. Lecture demonstrations at regular intervals will be given by many of the exhibitors.

A COMPLETE PROGRAM AND REGISTRATION BLANK WILL BE MAILED ON REQUEST

RECENT ACCESSIONS TO THE LIBRARY

MAY

Abeloos, M. La régénération et les problèmes de la morphogenèse. Paris, Gauthier-Villars, 1932, 253 p.

Adler, F. H. Clinical physiology of the eye. N. Y., Macmillan, 1933, 406 p.

Alessandrini, A.; Pampana, E. & Sabatucci, M. Gli esami di laboratorio, technica e diagnostica. Roma, Pozzi, 1932, 635 p.

American and Canadian hospitals. Edited by J. C. Fifield. Minneapolis, Midwest Publishers Co., [1933], 1560 p.

Baar, V. Wetter und Krankheiten.
Wien, "Ars Medici", 1932, 171 p.

Bailey, P. Intracranial tumors.
Springfield, Ill., Thomas, 1933, 475 p.

Beekman, F. Office surgery.
Phil., Lippincott, [1932], 402 p.

Bernheim, G. & Guyot, M. Traité d'analyses par les rayons ultra-violets filtrés.
Paris, Maloine, 1932, 363 p.

von Bertalanffy, L. Theoretische Biologie.
Berlin, Borntraeger, 1932, v. 1.

Beylot, E. M. & Baudrimont, A. Manuel théorique et pratique d'histologie. 3. éd.
Paris, Vigot, 1932, 670 p.

Bloomfield, A. L. & Polland, W. S. Gastric anacidity, its relations to disease.
N. Y., Macmillan, 1933, 188 p.

Blumenthal, F. & Jaffé, K. Ekzem und Idiosynkrasie.
Berlin, Karger, 1933, 188 p.

Boyd, W. Surgical pathology. 3. ed.
Phil., Saunders, 1933, 866 p.

Bridges, M. A. Dietetics for the clinician.
Phil., Lea, 1933, 666 p.

Brocher, H. Le mythe du héros et la mentalité primitive.
Paris, Alcan, 1932, 126 p.

Cameron, H. C. The nervous child at school.
London, Milford, 1933, 160 p.

Cavina, G. Tecnica della resezione gastrica.
Bologna, Cappelli, 1932, 138 p.

Chirurgische Operationslehre (Bier, Braun, Kümmell). 6. Aufl.
Leipzig, Barth, 1933, v. 1.

Clark, A. J. The mode of action of drugs on cells.
London, Arnold, 1933, 298 p.

Cockayne, E. A. Inherited abnormalities of the skin and its appendages.
London, Milford, 1933, 394 p.

Collie (Sir) J. Workmen's compensation; its medical aspect.
London, Arnold, 1933, 160 p.

Collins, J. Some aspects of the art and practice of medicine.
Lawrence, Univ. of Kansas, 1933, 83 p.

Dietrich, A. Allgemeine Pathologie und pathologische Anatomie.
Leipzig, Hirzel, 1933, v. 1.

Dobson, M. B. Binocular vision and the modern treatment of squint.
London, Milford, 1933, 107 p.

Dorée, C. The methods of cellulose chemistry.
London, Chapman, 1933, 499 p.

Drinker, C. K. & Field, M. E. Lymphatics, lymph and tissue fluid.
Balt., Williams, 1933, 254 p.

Duclos, H. Laennec.
[Paris], Flammarion, [1932], 282 p.

Durupt, A. L'interférométrie en clinique.
Paris, Doin, 1932, 204 p.

Galt, W. Phyloanalysis.
London, Paul, 1933, 151 p.

Guieysse-Pellissier, A. L'état réactionnel. Évolution du tissu lymphoïde en réaction.
Paris, Alcan, 1932, 224 p.

Haselhoff, E.; Bredemann, G. & Haselhoff, W. Entstehung, Erkennung und Beurteilung von Rauchschäden.
Berlin, Borntraeger, 1932, 472 p.

Imming, E. Kompendium der konservierenden Zahnbehandlung und des Füllens der Zähne.
Berlin, Dentistischer Verlag, 1933, 332 p.

Klüver, H. Behavior mechanisms in monkeys.
Chic., Univ. of Chic. Press, [1933], 387 p.

La Barre, J. Diabète et insulinémie.
Paris, Masson, 1933, 284 p.

Laignier-Terrasse, P. Némathelminthes et plathelminthes de l'appareil oculaire humain.
Paris, Maloine, 1932, 185 p.

Livre jubilaire offert au Professeur Hartmann par ses amis et ses élèves.
Paris, Masson, 1932, 679 p.

Lower, W. E. & Nichols, B. H. Roentgenographic studies of the urinary system.
St. Louis, Mosby, 1933, 812 p.

Lüttge, W. Zangengeburt im Röntgenbild.
München, Reinhardt, 1933, 55 p.

Melzer, E. Der Einfluss der Tuberkulose auf das Seelenleben des Kranken.
Stuttgart, Enke, 1933, 168 p.

Miles, A. & Wilkie, D.P.D. Operative surgery.
London, Milford, 1933, 590 p.

Montpellier, J. & Manceaux, A. Pratique hématologique.
Paris, Doin, 1933, 328 p.

Morche, R. Nouveau guide du mutilé de l'oreille et des personnes sourdes, demi-sourdes et dures d'oreille. [2. éd.].
Nice, Revue de l'ouie, [1932?], 259 p.

Obstetrics and gynecology. Edited by A. H. Curtis.
Phil., Saunders, 1933, v. 1.

Oppenheimer, C. Chemische Grundlagen der Lebensvorgänge.
Leipzig, Thieme, 1933, 298 p.

Parturier, G.; Goiffon, R. & Raulot-Lapointe, G. Contribution du laboratoire au diagnostic des maladies du foie.
Paris, Vigot, 1932, 155 p.

Ramazzini, B. Diseases of tradesmen . . . together with biographical notes . . . compiled by H. Goodman.
N. Y., Medical Lay Press, [1933], 95 p.

Regenbogen, J. H. Le rôle biologique de la catalase dans le métabolisme d'énergie.
Haarlem, Bohn, 1932, 139 p.

Robin, G. C. A. Enfants d'aujourd'hui. La paresse est-elle un défaut ou une maladie?
[Paris], Flammarion, [1932], 283 p.

Rongy, A. J. Abortion: legal or illegal?
N. Y., Vanguard Press, 1933, 212 p.

Schmidt, H. Fortschritte der Serologie.
Dresden, Steinkopff, 1933, 191 p.

Sebileau, P. Cancer de la langue.
Paris, Doin, 1932, 231 p.

Sharp, B. B. Neurological effects of syphilis; diagnosis and treatment.
London, Milford, 1933, 92 p.

Sinnott, E. W. & Dunn, L. C. Principles of genetics. 2. ed.
N. Y., McGraw-Hill, 1932, 441 p.

Smart, M. The principles of treatment of muscles and joints by graduated muscular contractions.
London, Milford, 1933, 217 p.

Sternberg, C. Lehrbuch der allgemeinen Pathologie und der pathologischen Anatomie. 2. Aufl.
Berlin, Vogel, 1933, 650 p.

Uffreduzzi, O. Trattato di patologia chirurgica, generale e speciale.
Torino, Unione Tip.-Edit. Torinese, 1933, v. 1.

Yearsley, P. M. The sanity of Hamlet.
London, Bale, 1932, 101 p.

HOURS DURING THE SUMMER

From June 15 until September 15 inclusive, the Library will be open on week days from 9 a.m. to 5 p.m., on Wednesdays from 9 a.m. to 10:30 p.m., and on Sundays from 10 a.m. to 5 p.m.

PROCEEDINGS OF ACADEMY MEETINGS

STATED MEETINGS

Tuesday Evening, May 16, at 8:30 o'clock

Program arranged in cooperation with

SECTION OF MEDICINE

I. EXECUTIVE SESSION

a. Reading of the Minutes; b. Election of Fellows; c. Report of Nominating Committee; d. Presentation of Diplomas; e. Election of officers—Section of Medicine, For Chairman—Henry J. Spencer; For Secretary—Randolph West; For member of Advisory Committee—William S. Ladd

II. PAPER OF THE EVENING

"The Prognosis of Heart Disease", Ronald T. Grant, University College Hospital Medical School, London

Discussion, Alfred E. Cohn, Lewis A. Conner

Thursday Evening, May 18, at 8:30 o'clock

THE EIGHTH HARVEY LECTURE

"Humoral Transmission of Nervous Impulses", Otto Loewi, Professor of Pharmacology, University of Graz.

This lecture took the place of the second Stated Meeting of the Academy for May.

SECTION MEETINGS

SECTION OF DERMATOLOGY AND SYPHILOLOGY

Tuesday Evening, May 2, at 8:30 o'clock

I. EXECUTIVE SESSION

a. Reading of the Minutes; b. Election of Officers, For Chairman—Leo Spiegel; For Secretary—Eugene F. Traub; For member of Advisory Committee—Paul E. Bechet

II. PRESENTATION OF PATIENTS

a. From the City Hospital; b. From the Beth Israel Hospital; c. From the Sea View Hospital

III. GENERAL DISCUSSION

JOINT MEETING

SECTION OF NEUROLOGY AND PSYCHIATRY

AND THE

NEW YORK NEUROLOGICAL SOCIETY

Tuesday Evening, May 2, at 8:30 o'clock

I. EXECUTIVE SESSION

a. Reading of the Minutes; b. Election of Officers, For Chairman—Clarence P. Oberndorf; For Secretary—C. Burns Craig; For members of Advisory Committee—Byron Stookey—five years; Leon H. Cornwall—three years (to fill the unexpired term of Michael Osnato, deceased)

II. Clinical Presentations

a. Psychic epileptic equivalents in frontal lobe lesions (2 cases) (15 min.), Leo M. Davidoff; b. 1. Spastic hemiplegia in an infant. Produced by a congenital cyst entirely replacing the cerebellar vermis; 2. Gasserian ganglion syndrome produced by a tumor of unusual nature (20 min.); 3. Spinal metastasis from a clinical benign thyroid, John E. Scarff; c. 1. Hemangioma (Lindau) of cerebellum; 2. Meningioma presenting trigeminal signs (20 min.); 3. Primary tumor of the gasserian ganglion, Ira Cohen

III. Paper of the Evening

Some histological features of glioblastoma multiforme (lantern slides) (20 min.), Edwin M. Deery

IV. Discussion

Section of Surgery

Friday Evening, May 5, at 8:30 o'clock

I. Executive Session

a. Reading of the Minutes; b. Election of Officers, For Chairman—Ralph Colp; For Secretary—Guilford S. Dudley; For member of Advisory Committee—Wm. Barclay Parsons

II. Presentation of Instrument and Cases

a. An occlusion button for intestinal fistulae, H. Dawson Furniss; b. Empyema necessitatis of the gall bladder, William T. Doran; c. 1. Osteomyelitis occulta of the second rib. Treatment; 2. Treatment of the abdominal wound in general peritonitis (three cases), Philip D. Allen.

III. Papers of the Evening

a. Acute empyema in children, J. V. Bohrer; b. Infrapulmonary empyema, Arthur Touroff

Discussion, Harold Neuhof, Fenwick Beekman, Howard Lilienthal

IV. General Discussion

Section of Historical and Cultural Medicine

Wednesday Evening, May 10, at 8:30 o'clock

I. Executive Session

a. Reading of the Minutes; b. Election of Officers, For Chairman—Russell L. Cecil; For Secretary—Jerome P. Webster; For members of Advisory Committee—Howard Reid Craig—five years; Alfred M. Hellman—one year (to fill the unexpired term of Bernard Sachs, resigned)

II. Papers of the Evening

a. St. Francis and medieval medicine, Edward F. Hartung; b. The last few hours of Nelson's life, Paul E. Bechet; c. Ancient dentistry in the old and new world (with lantern slides), Bernard W. Weinberger

III. General Discussion

The Chairman referred to the Beaumont Celebration to be held in October, 1933.

SECTION OF PEDIATRICS

Thursday Evening, May 11, at 8:00 o'clock

I. EXECUTIVE SESSION

Election of Officers, For Chairman—Martha Wollstein; For Secretary—Harry Bakwin; For member of Advisory Committee—John Caffey

II. SINGLE CASE PRESENTATION WAS GIVEN BY THE FOLLOWING HOSPITALS:

St. Luke's Hospital, A case of syphilitic hemiplegia
Presented by, A. M. Stevens (by invitation)

Roosevelt Hospital, Late results of splenectomy in sickle cell anemia
Presented by, John Fitch Landon

Polyclinic Hospital, Blood dyscrasia
Presented by, W. Morgan Hartshorn

Post-Graduate Hospital, Calcinosis circumscripta with generalized scleroderma
Presented by, Margaret R. Reynolds

New York Hospital, Periodic familial paralysis
Presented by, Ludwig Schoenthal (by invitation)

Mt. Sinai Hospital, Progeria
Presented by, Martin L. Stein (by invitation)

Lenox Hill Hospital, A case of foreign body in air-passage in an infant aged 22 months
Presented by, Julian Leo Rogatz

Hospital for Joint Diseases, Influenzal meningitis complicating fractured skull
Presented by, Leon Antell (by invitation)

Bellevue Hospital, Quartan malaria following transfusion
Presented by, Charles Hendee Smith

Babies' Hospital, Intratracheal rupture of tuberculous bronchial lymph node
Presented by, Russell B. Scobie (by invitation)

SECTION OF OPHTHALMOLOGY

Monday Evening, May 15, at 8:30 o'clock

I. EXECUTIVE SESSION

a. Reading of the Minutes; b. Election of Officers, For Chairman—Webb W. Weeks; For Secretary—W. G. Frey; For member of Advisory Committee—Mark J. Schoenberg; c. Remarks by the retiring chairman

II. PAPERS OF THE EVENING

a. A cosmetic lens for high myopia (5 minutes), Harold G. Noyes, Theodore E. Obrig (by invitation); b. When is the best time to operate children with strabismus (10 minutes), John H. Dunnington; c. The retraction syndrome. Indications for surgical treatment (10 minutes), Rudolph Aebli (by invitation); d. The prolonged occlusion test with illustrated cases (10 minutes),

Wendell L. Hughes; e. Indications for operation in combined vertical and lateral strabismus (15 minutes), James W. White; f. Remarks on the intimate relation between ophthalmology and neurology. Some reminiscenses, Bernard Sachs

DURING THE DEMONSTRATION PERIOD (7 TO 8:30 O'CLOCK)

a. Demonstration of the Maddox synotophore, Elizabeth K. Stark (by invitation); b. A case of retinitis proliferans, Wendell L. Hughes; c. A case of bilateral paresis of internal recti and inferior obliques, Frank C. Keil; d. Cases of disfunction of ocular muscles, James W. White, R. Aebli (by invitation), Wendell L. Hughes, S. A. Agatson; e. An exhibit of old and rare instruments, ophthalmoscopes, spectacles, etc. of interest to ophthalmologists. The New York Academy of Medicine, The Guild of Prescription Opticians of Greater New York, and John N. Evans

SECTION OF MEDICINE

Tuesday Evening, May 16, at 8:30 o'clock

Program arranged as a Stated Meeting

I. EXECUTIVE SESSION

a. Reading of the Minutes; b. Election of Fellows; c. Report of Nominating Committee; d. Presentation of Diplomas; e. Election of officers—Section of Medicine, For Chairman—Henry J. Spencer; For Secretary—Randolph West; For member of Advisory Committee—William S. Ladd

II. PAPER OF THE EVENING

"The Prognosis of Heart Disease", Ronald T. Grant, University College Hospital Medical School, London

Discussion, Alfred E. Cohn, Lewis A. Conner

A collation was served after adjournment, to which Fellows and guests were invited.

SECTION OF GENITO-URINARY SURGERY

Wednesday Evening, May 17, at 8:30 o'clock

I. EXECUTIVE SESSION

a. Reading of the Minutes; b. Election of Officers, For Chairman—C. Travers Stepita; For Secretary—Augustus Harris; For member of Advisory Committee—Meredith F. Campbell

II. PRESENTATION OF INSTRUMENT

Direct application of ultra-violet radiation to the genito-urinary tract, Samuel Lubash

III. PRESENTATION OF PAPER

Calculous pyonephrosis, I. E. Nash (by invitation)

Discussion, John F. Connors, Edward L. Keyes

IV. PAPER OF THE EVENING

Nongonorrheal urethral discharge (An etiological study of 333 cases), P. S. Pelouze, Philadelphia (by invitation)

V. GENERAL DISCUSSION

Section of Otolaryngology
Wednesday Evening, May 17, at 8:00 o'clock

I. Executive Session
   a. Reading of the Minutes; b. Election of Officers, For Chairman—Samuel J. Kopetzky; For Secretary—Wm. Wallace Morrison; For member of Advisory Committee—David H. Jones

II. Presentation of Instruments and Case
   a. The tubercular larynx and "up-hill" feeding, C. D. Van Wagenen; b. 1. A new dilator for a closed orifice of the eustachian tube; 2. A new self advancing catheter for lipiodol introduction into the lung, Louis K. Pitman (by invitation); c. Tracheofistulization for prolonged pulmonary catheterization, M. J. Mandelbaum

III. Demonstration
   The use of the fresh sheep head in teaching the technique of the submucous resection of the nasal septum, Wm. Wallace Morrison

IV. Case Reports
   a. Presentation of four cases of brain abscesses originating in the otorhinological foci, Leo M. Davidoff; b. Report of two cases of neoplasm in the external auditory canal, operation, Hugh B. Blackwell; c. Acute mastoiditis complicated with a septic blood picture and also lesions resembling agranulocytic angina, Arthur J. Herzig
   Discussion, J. Pincus (by invitation)
   d. Otogenous streptococcus meningitis with recovery, Louis Kleinfeld

V. Papers of the Evening
   a. Neutropenia, Paul Reznikoff; b. The metabolic preparation of patients for laryngectomy and their post-operative care, Harris A. Houghton
   Discussion, Arthur S. Wilson

Section of Orthopedic Surgery
Friday Evening, May 19, at 8:30 o'clock

I. Executive Session
   a. Reading of the Minutes; b. Election of Officers, For Chairman—Paul C. Colonna; For Secretary—Leo Mayer; For member of Advisory Committee—Mather Cleveland

II. Presentation of Cases
   a. From the Orthopedic Service of the Post-Graduate Hospital, 1. Construction of a thumb congenitally absent; 2. Bone graft for tuberculosis of the spine (after 21 years), Fred H. Albee; 3. Recurrent dislocation of the temperomandibular joint, Leo Mayer; 4. Old double congenital dislocation of the hip, Charles Ogilvy, Wm. Hadden Irish; 5. Multiple fractures of the femur, pelvis and tibia treated by bone peg and living suture, Charles Murray Gratz (by invitation); b. From the New York Orthopaedic Hospital, 1. Echinococcus cyst of the femur, M. Beckett Howorth (by in-

vitation); 2. An unusual case of coxa vara, James W. Tourney (by invitation); 3. A case of scoliosis treated by spine fusion, John T. Saunders (by invitation); 4. Gumma of the tendo Achillis, George A. L. Inge (by invitation); 5. A case of ununited fifth lumbar arch, Halford Hallock (by invitation); c. From the Orthopedic Service of Mt. Sinai Hospital, 1. Mediastinal abscess due to old thoracic Pott's disease with complications, Victor J. Jacobsohn; 2. Osteo-chondro-sarcoma of first phalanx of great toe—treated by excision and bone transplant, Robert K. Lippmann; 3. Acute atrophy of foot; 4. Early metastasis of epithelioma of foot, Seth Selig; 5. Corrective finger splint, Edgar D. Oppenheimer

III. General Discussion

Section of Obstetrics and Gynecology

Tuesday Evening, May 23, at 8:30 o'clock

I. Executive Session

a. Reading of the Minutes; b. Election of Officers, For Chairman—Frederick C. Freed; For Secretary—Harvey B. Matthews; For member of Advisory Committee—Samuel J. Scadron

II. Papers of the Evening

a. Abdominal and pelvic fascias with surgical applications, Joshua W. Davis (by invitation)

Discussion, Dougal Bissell, Ralph A. Hurd

b. Split pelvis—its relation to pregnancy, Locke L. Mackenzie, Discussion, Leon T. LeWald; c. Changes in the urinary tract during pregnancy, Irving J. Stumpf (by invitation); d. Dystocia due to cervical operations—reports of three cases, Murray L. Brandt, Discussion, Harvey B. Matthews; e. Gynatresia, Onslow A. Gordon, Jr. (by invitation)

Discussion opened by, Harvey B. Matthews, Oscar Glassman

AFFILIATED SOCIETIES

New York Roentgen Society

In affiliation with The New York Academy of Medicine

Monday Evening, May 15, at 8:30 o'clock

I. 8:30 to 9:00 p.m. Demonstration and discussion of interesting cases

II. 9:00 p.m. "Medico-legal expert testimony as it applies to the roentgenologist", Arial W. George, Boston (by invitation)

III. General Discussion

IV. Executive Session

New York Meeting of the
Society for Experimental Biology and Medicine
Under the auspices of
The New York Academy of Medicine
Wednesday Evening, May 17, at 8:15 o'clock

I. A simply prepared broth for producing hemolytic streptococcal hematoxin (streptolysin), H. F. Swift, B. E. Hodge

II. Studies of the etiology of influenza, A. R. Dochez, K. C. Mills, Yale Kneeland, Jr.

III. Influence of salt upon diffusion from bacterial cells, C. E. A. Winslow, H. H. Walker

IV. Growth characteristics of rough and smooth acid fast bacteria living in microculture (illustrated with micro motion pictures), R. W. G. Wyckoff

V. Cellular response to acetone—soluble lipoids from mycobacteria, K. C. Smithburn, F. R. Sabin (Introduced by F. P. Gay)

VI. Total and thyroxine iodine content of thyroid gland after injection of saline anterior pituitary extracts, G. L. Foster, A. B. Gutman, E. B. Gutman (Introduced by W. W. Palmer)

VII. Failure of a mouse carcinoma material to enhance a mouse sarcoma, A. E. Casey

VIII. Acetylation studies, B. Harrow, A. Mazur, C. T. Sherwin

IX. Active immunization against tetanus in humans of different ages, Edith Lincoln (Introduced by W. H. Park)

New York Pathological Society
In affiliation with The New York Academy of Medicine
Thursday Evening, May 25, at 8:30 o'clock

I. Demonstration of pathological specimens

II. Papers of the Evening

a. Myxoma of the tricuspid valve, Thomas C. Jaleski (by invitation); b. Two tumors of the thymus, one with distant metastases, Angelo M. Sala, Elma Barany; c. An unusual case of ischemic degeneration of the posterior pituitary, Dominic A. De Santo (by invitation); d. Myoblastoma of the striated muscle, Paul Klemperer

III. Executive Session

MEMBERS OF ADVISORY COMMITTEES OF SECTIONS

1933-34

Dermatology and Syphilology

Chas. M. Williams
Jerome Kingsbury
George M. MacKee
Howard Fox
Paul E. Bechet

Surgery

Edwin Beer
William C. White
Otto C. Pickhardt
Robert H. Kennedy
Wm. Barclay Parsons

Neurology and Psychiatry

Irving H. Pardee
Moses Keschner
Leon H Cornwall
(To fill the unexpired term of Michael Osnato, deceased)
Joseph H. Globus
Byron Stookey

Historical and Cultural Medicine

Alfred M. Hellman
(To fill the unexpired term of Bernard Sachs, resigned)
Ira Otis Tracy
Frederick Paterson
Louis F. Bishop
Howard R. Craig

Pediatrics

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F. Elmer Johnson
Hugh Chaplin
Herbert B. Wilcox
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Ophthalmology

Bernard Samuels
John M. Wheeler
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Herbert W. Wootton
Mark J. Schoenberg

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Edgar Stillman
George Baehr
Lewis F. Frissell
Mills Sturtevant
William S. Ladd

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J. Sturdivant Read
Stanley R. Woodruff
Archie L. Dean, Jr.
Thomas J. Kirwin
Meredith F. Campbell

Otolaryngology

Westley M. Hunt
Clarence H. Smith
Francis White
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Edgar D. Oppenheimer
Armitage Whitman
Alan DeForest Smith
Isadore Zadek
Mather Cleveland

Obstetrics and Gynecology

Reginald M. Rawls
William E. Caldwell
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Gerard L. Moench
Samuel J. Scadron

FELLOWS ELECTED

MAY 16, 1933

Girsch D. Astrachan	237 East 20 Street
Abram Wilbur Duryee	865 First Avenue
Wolfgang Grethmann	8910—35 Avenue, Jackson Heights, N. Y.
Claude Edwin Heaton	136 East 64 Street
John Charles Kilroe	1114 Madison Avenue
F. Philip Lowenfish	25 Central Park West
Robert Hall McConnell	65 Central Park West
Abraham Max Rabiner	890 Park Place, Brooklyn, N. Y.
Armin St. George	19 West 55 Street
Charles Franklyn Sims	2710 Morris Avenue
Robert Folger Solley	25 East 92 Street
Matthew Walzer	255 Eastern Parkway, Brooklyn, N. Y.
Audrey Goss Morgan	1466 Ogden Street, Washington, D. C.

DEATHS OF FELLOWS OF THE ACADEMY

WILLIAM HOWARD FARRINGTON, M.D., Raubsville, Pa.; graduated in medicine from Bellevue Hospital Medical College, New York City, in 1872; elected a Fellow of the Academy June 4, 1885; died, May 18, 1933.

BENJAMIN FRANKLIN OCHS, M.D., 865 West End Avenue, New York City; graduated in medicine from the College of Physicians and Surgeons, New York City, in 1886; elected a Fellow of the Academy February 3, 1910; died, May 25, 1933. Dr. Ochs was a Fellow of the American Medical Association, a member of the County and State Medical Societies, the Manhattan Dermatological Society, the Bronx Dermatological Society, a member of the Society of Alumni of Lebanon Hospital, and Consulting Dermatologist to Fordham and Rockaway Beach Hospitals. For a number of years he was Professor of Dermatology in Fordham Medical School.

J. FLANDREAU VAN FLEET, M.D., 17 East 38 Street, New York City; graduated in medicine from Fordham University, New York, in 1918; elected a Fellow of the Academy November 3, 1927; died, June 5, 1933. Dr. Van Fleet was a Fellow of the American Medical Association, a member of the County and State Medical Societies, a member of the Society of Alumni of Manhattan Eye, Ear and Throat Hospital; ophthalmological surgeon to Manhattan Eye, Ear and Throat Hospital and consulting ophthalmologist to Nyack Hospital.

STANDING COMMITTEES OF THE ACADEMY
1933

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*Executive Committee